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ABSTRACT

A retention study was conducted at Los Angeles Harbor College focused on the fall 1976 and spring 1977 students who indicated a natural language other than English (NLOE). A program participant group, formed of 169 volunteer NLOE students, were enrolled in a bilingual vocational program developed in five discipline areas, using the Spanish, Samoan and Tagalog languages. A comparable control group of 147 was drawn in stratified random form from all other NLOE students. Program participants completed a personal inventory, and interest and ability tests which were interpreted to them by a career counselor. Course work, grade point averages, and results of a student opinion survey were analyzed for both groups in a multivariate analysis. Findings indicated that completion rates could be improved by 44% and grade point average by 42% for NLOE students by using a combination of adapted career counseling, bilingual vocational instruction, and communication development instruction. Primary student objectives were to improve their abilities in English reading, speaking, and writing. College support, an information exchange between NLOE students, college, and community, and training programs for faculty and counselors are recommended. Appendices include the inventory, survey instrument, tabulated results, and criteria used by the program evaluator. (RT)

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"MULTIVARIATE ANALYSIS OF BILINGUAL VOCATIONAL EDUCATION"

RESEARCH REPORT
77 - 07

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WE EXPRESS OUR GRATITUDE FOR

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And to all of those significant others who contributed their support and critiques to the processes and outcomes of the effort.

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MULTI-VARIATE ANALYSIS OF BILINGUAL VOCATIONAL EDUCATION

A SUMMARY

The Research

Utilizing multi-variate analysis, the research project tested the following hypotheses:

(1) Learning gained from program participation will be evidenced by a distinct improvement in the completion rates for NLOE students.

(2) Learning gained from program participation will be evidenced by a distinct improvement in the grade point average of NLOE students.

(3) Improved achievement for NLOE students is a function of the joint Student ⇄ Institution Progress through the learning cycle Information → Understanding → Appropriate Action which makes possible effective use of their collective resources.

Population Samples

Interested NLOE (natural language other than English) students from Asian, Filipino, Samoan, and Spanish language groups who availed of program service during Fall, 1976 and Spring, 1977 constituted the program group (N = 169). A comparable, randomly selected group (N = 147) in terms of ethnicity and majors was selected for comparison of program impact. Both groups were enrolled in pre-vocational, vocational, and academic courses with the vocational majors predominating.

Results

(1) Completion rate for program students was significantly higher than that of the control group (85% vs. 57%).

(2) Units completed by program NLOEs was higher than that of the control NLOEs (9.083 units vs. 6.291).

(3) The effect of Communications development courses on grade point average and retention rate was quite pronounced for program NLOEs. Thus, the more Communications development courses they took, the better their GPAs and retention rate.

(4) Since very few of the control NLOEs were enrolled in Communications development classes, the said classes had little effect on their GPAs and retention rates.

(5) The GPAs of control NLOEs who enrolled in Bilingual Vocational Education courses were positively influenced by their grades in these classes.

(6) Grade point average of program NLOEs was higher (B) than that of control NLOEs (C).

(7) The association between communications development and NLOE students' reasons for attending college was very high.

(8) If control NLOEs were provided program service, their retention rate would have increased 44%.

Recommendations:

1. College resources need to be allocated to a vital, continuing program service that equalizes opportunity for successful achievement by the NLOE student, an increasingly visible entity in the College. If it is to be effective, the program needs to have the following components:

   a. An on-going Information Exchange that provides continuity for the dissemination of information to NLOEs. Through the information exchange, coordination and use of college services would be effected, activities which have been demonstrated to improve student achievement and retention. Among its finer points could be:

      i. sharing of research findings with all self-identified NLOE students;

      ii. development and implementation of a 1-unit orientation course for all NLOE students which delineates the institutional learning process in terms of behavioral (performance) objectives;

      iii. addressing the College need for information by providing encouragement and incentives for administration, faculty, and staff to use the techniques and procedures that have been demonstrated to improve achievement and retention;

      iv. provision of diagnostic assessment of communication skills which involves the NLOE student as a co-evaluator and decision maker;

      v. strong recommendation of prescriptive assignment to a program of Communications Development based on individual student profile of abilities, interests, skills, and time frame;

      vi. an ombudsman whose responsibilities entail communication with all departments and all NLOE students to prevent difficulties from evolving into unresolvable issues and complaints;

   b. Because very few members of the faculty have adapted courses to the needs of NLOEs, college resources need to be allocated and encouragement proffered to the continued adaptation of course content, approaches, and delivery systems by interested faculty to institute appropriate changes that reflect a

variety of learning styles.

2. The Program Service needs to be in constant communication with the bilingual communities through activities that encourage interaction and orchestration of interests among the communities, students, and College. Such activities provide the basis on which a broader program could be built. Components could include:

   a. sharing the results of this study with the bilingual advisory committees, which approved initiation of the research proposal, to obtain their responses, thoughts, and recommendations;

   b. reporting of results to all NLOEs on campus to encourage greater participation in continuing services;

   c. supporting and assisting interested faculty to communicate with representatives of the bilingual communities to make course adaptation as accommodative as possible of NLOE students' particular learning needs; and

   d. utilizing the outreach capabilities of bilingual advisory councils to make their respective communities cognizant of the benefits that could accrue to those who would avail of Harbor's adapted offerings. All avenues of information dissemination need to be utilized through active, effective, and innovative Outreach methods.

3. A training program needs to be instituted for all faculty, not only Vocational Education and Communications instructors, to work better with NLOE students. Research findings have demonstrated that NLOEs performed better and were retained in courses mediated by faculty who possess an appreciation for the complexities and difficulties associated with second language acquisition, an appreciation of their uniqueness, and who are predisposed to providing the climate of learning they need to explore and grow.

4. A training program needs to be instituted for counselors to adapt counseling to suit the needs of NLOE students. NLOE counseling needs to foster a climate where difference is considered to be both good and desirable. At the same time, NLOE counseling needs to provide opportunities for students to become involved with the College to understand themselves and to become part of what is taking place so that they feel that, in some way, they are the ones deciding their future.

5. Since the results of the research showed that the majority of NLOEs served by the program and who benefited from it were Vocational majors and since Vocational Education continues to be a primary vehicle for the NLOE to positively impact the system, the College needs to further stimulate the occupational areas so that they too, could respond fully in the process of maximizing NLOE potentials.

6. Since the results of the research showed that improved college retention and grade point averages of NLOEs could be effected with the use of in-house resources, it is deemed essential that coordination of all available college resources be strengthened and supported by the institution itself to encourage personnel to explore creative ways of using them.

BILINGUAL/MULTICULTURAL VOCATIONAL EDUCATION 1976-77: A MULTIVARIATE ANALYSIS

INTRODUCTION

Los Angeles Harbor College is an "open door" community college which makes all residents of the service area who are eighteen or older or have obtained a high school diploma eligible for admissions.

Our philosophy states:

> We believe that each individual should have the opportunity to develop to his greatest potential. We have a high regard for individual merit and a deep respect for human dignity.
>
> We believe that a community college should provide students with skills, knowledge, and experiences which will assist them to live effectively. We have the responsibility of providing a stimulating setting which promotes productive interaction among students, faculty, administrators, and the community (Catalog '76)

The College service area is composed of many sub-communities which are multi-ethnic, separated geographically by strong socio-economic, political, and educational factors and generally defined by physical boundaries (Appendix A). Upper San Pedro and the Palos Verdes Peninsula encompass some of the wealthiest per capita cities in the state. Residents are college oriented, bureaucratically sophisticated, experienced in communicating with faculty and in taking full advantage of educational services and facilities.

East Wilmington, Harbor City, and lower San Pedro are the areas with the lowest per capita income and the highest incidence of social problems, such as unemployment, dilapidated housing, single parent families, juvenile arrest rate and alcohol and drug abuse. Statistics gathered from these areas grossly underrepresent the problems because a large segment of the population does not speak English and there is a general mistrust of public agencies. Past experience has led them to view the institutions of government as restrictive and repressive, consequently, non-communication has come to be accepted as the best means of survival. Counselors have come to be regarded as judgmental and disciplinarian rather than supportive. The general attitude is that "schools are the place to fail." Historically, students and parents have been made to feel ashamed that their native language is not English. Serious blocks to reading, the major tool of learning, have been built. Elementary schools through federal funding are making comprehensive efforts to overcome this problem by involving parents and community in their total functioning, but the problems prevail at the secondary level. Banning High, in Wilmington, had a 1973 attrition rate of 35%. Gang violence has accelerated as the Black and Samoan populations extend into the predominantly Mexican American or Chicano areas. Public trasportation is not available to these designated poverty areas and the estimated unemployment rates by private service agencies range from 50% to 75% for the non-skilled non-reader. The ethnicity of the service area of Harbor College is not equally reflected in the student body, particularly not in that segment achieving satisfactory progress or course completion (See Appendix B).

Total enrollment Fall 1976 semester was 11,506. Declaration of ethnicity is voluntary for registering students and records indicate that information thus obtained is accurate. Our estimate based on other records is that 15% are Mexican American

or Chicano, 1% Samoan, 14% Black, and 9% Asian or Pacific Islanders. Instructors and counselors generally agree that few of these students, particularly those whose Native Language is Other than English (NLOE) will even complete enough courses satisfactorily to obtain an A.A. degree or certification for transfer. Perceptions most often reported by faculty categorize the NLOE student as non-college ready, and place the responsibility on the student to gain English language proficiency in evening school or elsewhere and then return. This attitude negates the open admissions policy and according to General Systems Theory is an example of not attending the resolution of a problem, but of "labeling" to shift the problem to the responsibility of other agencies. Labeling the non-traditional student out of the system has the effect of weakening the system according to:

> Ashley's Law of Requisite Variety states that, "The amount of heterogeneity a system can maintain, internal to itself will determine the amount of heterogeneity that system can deal with in the environment." . . . Any time efforts are made to homogenize, a boundary is placed on what that system can do in relation to the environment." Standardizing school procedures increases the homogeneity of the total school system, limits the viability of the system and limits its ability to exist in the environment (1973, Newsletter).

Los Angeles Harbor College has sought and used Vocational Education funding to provide special services for the "disadvantaged learner" including:

1. Career Guidance Center
2. Special "Bus" for Outreach to the community
3. College Recruitment program
4. College Readiness program

Such programs have proven beneficial to NLOE students and community. However, external funding is intermittent and the resultant lack of continuity of program and personnel weakens the channels of communication to the community and the commitment of resources to implement the recommendations for improvement of educational programs and services. The more educationally sophisticated students tend to become the users of services which were initiated to serve the lesser prepared student.

In 1975-76, the College used Vocational Education funding to implement a Bilingual Vocational program. Materials and support services and community involvement were developed in five different disciplines for students whose native language is Spanish, Samoan, and Tagalog. Surveys of the ethnic groups in their native language as well as English were conducted by persons fluent in both languages to ascertain the educational perceptions, interests and needs of these various linguistically determined sub-populations. Results indicated that at least 80% of the Mexican American community felt a need for more participation in determination of college goals and cultural emphasis; improved communication; better access to counseling in the community and at the College, (particularly counseling related to employment, job selection, training, and placement) (See Appendix C); and an interest in participation in future planning. Advisory Council meetings consistently reaffirm their concern that programs and services are not sufficiently adapted to meet the educational realities of their communities. They supported continuation of the Bi-Voc. Ed. program and approved the conduct of the research as a contribution to planned improvement. The self-contained program proposed for funding under Voc. Ed. - Part J for 1976-77 consisted of several components.

These included:

a. Adaptive counseling - the process by which the student and the College become aware of each other's expectations and resources, and cooperate to utilize these to maximize the development of both;

b. Adapted instruction - refers to courses which have been redefined to address the specified learning needs of the NLOE student. It includes modification of materials translated into the student's natural language and modification of teaching styles to ensure better understanding by the students;

c. Communication Development - courses in Speech, Reading, and Writing of English that are geared to the use of the student's natural language competency as the foundation from which to learn and master the English language. Materials for these courses are related to student's vocational majors.

d. Peer Service - tutoring and counseling provided by fellow NLOE students who have had sufficient experience to use college resources to their advantage and who may be able to communicate with their peers more effectively due to cultural and linguistic kinship.

e. Cooperative Education - course work which allows the student employee to receive on-the-job training and unit credit for work experience directly related to his major or vocational goal; and

f. Intensive 6-Week Summer Course - for NLOE students to gain credit for a concentrated program of vocational and linguistic development designed to further individual educational objectives.

The Rand Report, Federal Programs Supporting Educational Change, Volume IV: The Findings in Review, in summarizing the findings of "a several year study of federally funded programs designed to introduce and spread innovative practices in public schools" (Berman, 1975) cites as reasons for the failure of these programs to bring about consistent or stable improvement in student outcome:

> Innovative ideas and technologies tried thus far are inadequate or under developed; more R & D is needed.
>
> Change in student outcomes has occurred, but the measurement and analyses are inappropriate or insensitive.
>
> Innovative practices are not implemented as planned.
>
> . . . Innovations may result in disappointing outcomes not because of inadequacies of the innovative idea but because of the difficult and uncertain process of implementing innovative efforts in an educational system that resists change.

The Rand study of a selected representative sample of 293 projects in 18 states identified as common assumptions:

> American education should be doing better with respect to a variety of goals ranging from specific objectives,

> such as student reading achievement, to the broad concerns of student personality and social development. . . educational practices. procedures and methods can be improved within the existing educational structure.

Title VII, Bilingual Education, one of the four categorical programs studied which encourages development of educational models to serve the particular needs of the NLOE student is based on the philosophy that "cultural pluralism" should be recognized and dealt with by American public education.

Findings of the study indicate that the difficulties experienced by Los Angeles Harbor College in providing on-going equality of educational opportunity and services to its bilingual communities are common to those experienced throughout the country. The study finds that receptivity of the institutional setting to the change project is a necessary condition for successful implementation and that mutual adaptation between project components and institutional function is the key to serious change. "Adaptive planning, staff training keyed to the local setting and local material development are the components which enable support and commitment of administrators and staff to be fully engaged (Berman, 1975 p. 21).

Many college personnel express a feeling of frustration engendered by the community expressions of need because there has been an investment of time and effort in securing external funding for programs for the "disadvantaged" and in developing community contacts. The problem is a lack of common ground of understanding for real communication and learning to occur which would translate community need into educational program. Vocational Education research indicates that successful education for adults requires:

> visible opportunities for advancement:
> improved self-concept of the learner;
> instructors engaged as learners; and
> feedback processes which enable a group to see the consequences of their action and how the action has achieved the consequences (Adams, 1972).

If adaptive planning is to occur, college personnel and community need validated measures of the actual effectiveness of specific services, so that each group can assess the consequences of their actions in terms of effect on students.

"A Bilingual Symposium: Building a Research Agenda," the 50th annual meeting of the Linguistic Society of America, involved both linguists and educators to initiate a dialogue concerning planning and practice in education. General consensus was that little published research exists concerning second language acquisition for non-English speakers. This refers essentially to children. The situation for adult NLOE students is so bleak that the problem has rarely been stated. There is a critical need for educators to understand basic ethnographic linguistic principles to enable them to communicate effectively with NLOE students so that the teaching learning process may proceed.

The purpose of this research project was to clearly identify the relative contribution of the major components of the Bilingual Vocational Education program to the successful educational development and progress of the participants in the program, who are engaged in a mutual learning process with college personnel.

It was proposed that a measured demonstration of the effectiveness of a teaching technique specifically designed to improve communication between teacher and learner will improve the self-concept of each in the fulfillment of their respective roles and thus enhance the learning process. The definitive analysis of the various components and their interrelationships will facilitate the adaptive planning which is required for effective implementation.

The strategy for the original proposed research was based on a model of educational growth. From the college perspective, the growth model initially was seen as utilizing external resources for the start and development of a program of adapted instructional-support services to improve achievement, i.e., completion and retention rates of NLOE students. Second, the model was noted as a move that would accord recognition to the process and, upon adoption, provide a proven component to augment the College's regular program. Third, the model was perceived as an effort by the College to implement recommendations made by the Los Angeles County Advisory Council for Pupil Services in A Master Plan for Pupil Services which specified coordination and continuity as the intrinsic constructs upon which a meaningful service could be founded. This plan was developed to respond to an inclusive survey of California Community Colleges, which revealed that "these colleges have done nothing special to assist minority students in meeting the expectations of the college" (Trent, 1970). But the Los Angeles Harbor College Vocational Education, Part J project, the subject of the research grant, did not receive funding for 1976-77. It was therefore incumbent upon the researchers to re-examine the altered situation in terms of existing resources, restate the research problem, develop an appropriate research design, and restructure the service program.

The alternative research design was formulated founded on a No-Growth model. This model required a redefinition of the program to use existing college resources to provide the counseling and instructional services for the NLOE student participants. The No-Growth model imposed the following parameters:

1. Limited temporary external resources consisting of a Vocational Education - Part C grant and residual student assistant funds from an Adult Indochinese Refugee grant.

2. Lack of an identified institutionalized program serving the special needs of NLOE students. This meant there were no trained bilingual vocational instructors responsible to the project director for the accomplishment of objectives. This also meant that there was no pre-selected, pre-oriented, or pre-controlled NLOE student population to comprise the research sample.

3. Several positive contributions to the model existed that were results of the Vocational Education - Part J program of 1975-76. Among them were a small number of faculty committed to course adaptation and who had demonstrated special interest in working with NLOE students; some career counselors committed to working with NLOE's; competent, well-trained NLOE students who understand the system and know how to use it; a committed Coordinator of Vocational Education with resource support; job information and services; a student population in need of information germane to understanding and utilizing the services provided to enable them to achieve satisfactory educational progress; and a project director who knows college resources and who enjoys acceptance by the faculty, NLOE students, and the bilingual communities. These communities have cooperated in the development and supported the implementation of the bilingual-multi cultural program. They have been a major force in encouraging participation by NLOE students. A fundamental contribution of the program was the gestation of stated policy to operationalize

College goals, which clearly attest to the provision of equitable services to all categories of students. Through the program, each instructional division and support service adopted objectives that seek to adapt content, materials, and delivery system to accommodate the entry capability of NLOE students. Formalization of these objectives was affected through their incorporation in the College 5-year Master Plan. However, reflective of the common experience indicated by the Rand study (see page 3), implementation of said objectives continued to be a problem. The question became, can the college make actual practice congruent with the specific objectives as delineated by all disciplines and services? The prerequisite question is can college personnel acquire an attitude of open-minded respect for the NLOE, for his* learning potential, his culturally based learning styles and his individual attributes, interests and communication patterns? These questions reveal learning problems which must be addressed from the conjoined needs of the community, the students, teaching and counseling faculty and administration.

Theoretical Framework

The program was restructured according to the redefinition of the problem. Simply stated it became one of identification, use and assessment of all existing resources to enable the college to learn more about the NLOE student to maximize its services to accommodate and develop his learning potential. Thus defined as a learning problem, the model deemed most appropriate as the construct for analyzing program operation and student activities and their interrelationships in impacting educational progress for NLOE students was Bloom's taxonomy of learning behaviors (Popham, 1970). Bloom's taxonomy defines a sequence of behaviors, beginning with receipt of information, which are the necessary constituents of the learning process. He distinguishes between cognitive and affective domains. The cognitive domain refers to processes of the intellect, which move through six levels from gathering knowledge to evaluation, as effective learning occurs. The affective domain refers to those behaviors involved with attitudes, beliefs, and values and are more difficult to define and assess in quantitative terms. For the purposes of this study, the model was collapsed into three hierarchical stages proposed to be essential if the desired cooperative learning situation is to be instituted. The three stages consisted of: (1) information, (2) understanding, and (3) appropriate action.

Information encompasses the fundamental levels of the cognitive and affective domains "receiving" and "knowledge." Understanding subsumes the higher levels of cognitive and affective behaviors which include the expectations, perceptions, responsibilities, and modes of communication of each set of participants in the learning process. Appropriate actions consist of all learning behaviors program participants engage in, including "application," "analysis," "synthesis," and "evaluation," which open up possibilities for free choice and individual decision that, in turn, are measured by established criteria for successful achievement, development, and progress.

Given the foregoing phases of development, this study investigated the proposition that NLOE students can achieve success through effective utilization of existing College resources if both the instructional and support services and the students possess information and understanding of:

1. Student background, attributes, and skills;
2. the relationship of student background, attributes, and skills to the educational process; and
3. the import of student background, attributes, and skills to a vocational career plan which incorporates education as the medium of progress.

*Refers to he/she throughout

The ancillary proposition investigated in this study is that through the intervention of a program of adapted instructional and support services, which moves the student through the higher levels of learning in the understanding component, immediate appropriate actions are brought about for students and instructors alike. The appropriateness of such actions were measured through accepted standards of educational achievement, e.g., completion rate and grade point average. Completion rate refers to the ratio of units completed/units attempted per semester with a range of zero to one hundred percent. Grade point average is the mean grade obtained by dividing the total grade points earned by the number of units completed on the basis of 0 to 4.00 representing F or W = 0, D = 1.0, C = 2.0, B = 3.0, and A = 4.0.

The study investigated the following research questions:

1. Given the commitment to equity for NLOE students in its goals and objectives, can Harbor College effect meaningful improvement in their recruitment, completion, and retention rates without a self-contained program of instruction and services that accommodate their particular needs in consideration of individual NLOE background, attributes and skills;

2. Can the retention and success of NLOE students at Harbor College be increased significantly through the intervention of an adaptive model that provides information and understanding to:

    a. the student by linking his/her personal characteristics, background, interests, and goals to college functions and career options; and

    b. all college functions and interested personnel to enable them to constructively deliver services to all NLOE students.

The following hypotheses were tested in the study:

1. Learning gained from program participation will be evidenced by a distinct improvement in the completion rates for NLOE students as compared to NLOE non-participants.

2. Learning gained from program participation will be evidenced by a distinct improvement in the grade point averages of NLOE students.

3. Improved achievement for NLOE students is a function of the joint Student ⟷ Institution Progress through the learning cycle Information ⟶ Understanding ⟶ Appropriate Action which makes possible effective use of their collective resources.

The study utilized the following operational hypothesis:

1. Completion rates for NLOE students in the program (p) will be consistently higher than those of a comparable randomly selected control (c) group at a measure beyond the .001 significance level.

2. Grade point averages (with a range of 0 to 4.00) for NLOE students in the program (p) will be consistently higher than those of a comparable randomly selected control (c) group at a measure beyond the .001 significance level.

3. Diagnostic assessment and prescriptive assignment to educational services appropriate to individual student attributes and interests causes reduction in time loss and diminished achievement for NLOE students and higher retention for the College.

a. Communication Development (CD) will be demonstrated to be the major component contributing to successful achievement and retention for NLOE students if they are appropriately enrolled following diagnostic and prescriptive counseling.

b. Participation in courses adapted to accommodate learning needs of NLOE students will be demonstrated to improve their performance and college retention.

c. Los Angeles Harbor College Previous Experience will have a lesser relationship to achievement measures for the program group than for the control group.

Conceptual Assumptions

The conceptual assumptions by which the researchers schematized the problem and their investigation were:

1. Behavior is primarily purposive, that is, oriented toward attainment of goals on the basis of selection among accessible alternative possibilities. It postulates that decision is the fundamental element. Critical factors in making a decision are: (a) availability of information concerning objectives and goals; (b) alternative means of attaining them and educational goal/objectives, and how to attain them; and (c) individual capacity to deal with that information.

2. Incompatibility among goals and objectives as well as between objectives and goals is a function of inadequate information and piece meal fashion of dealing with problems without awareness and assessment of consequences.

3. In addition to the idiosyncratic psychological forces at work in each and every individual, decisions have antecedent determinants involving conditions, forces, and processes which are to some extent independent of the individual. The influence of these determinants upon the individual is subject to the control of the individual if he learns to assess and utilize them to his personal advantage.

The Research Population

Non-existence of a self-contained Bilingual Vocational Education program due to absence of federal funding of Part J necessitated an alternative approach to obtain an acceptable research sample. Outreach and on-campus efforts were heavily expended to reach as many people as possible in the service community. Assistance of the bilingual communities through the advisory committees was most valuable in making their respective communities - - potential students and enrolled students alike - - cognizant of the alternative program the College was undertaking for NLOEs. At the same time, the assistance of NLOEs who had achieved success at Harbor was utilized by having them speak to enrolled NLOEs and to go out to their respective communities, publicize, and disseminate information on the availability of a program package oriented to adapted learning, with requisite self-assessment and exploration, and assignment of NLOEs to appropriate courses. As a result of these outreach and on-campus efforts, two sets of research population were obtained in the Fall of 1976 and in the Spring of 1977. It is the informed opinion of the researchers, based on past experience and analysis of student records, that those individuals who agreed to participate would not normally avail of college services. Participation was not dependent on personal motivation but was a result of the strong encouragement by community and peers as well as curiosity about how the program differed from other programs set up for their benefit.

The Fall, 1976 and Spring, 1977 students, hereinafter referred to as program group, were comprised of four categories of NLOEs. The category Asian subsumes Chinese, Japanese, Indochinese, Persian, and Thai. Filipinos comprised a separate category. Samoans were another. Spanish consisted of individuals from the Chicano, Cuban, Central, and South American groupings.

The program group consisted of 169 participants, 29% of them Asians, 17.8% Filipinos, 12.4% Samoans, and 40.2% Spanish. Females outnumbered males by 1%. Average age was 27.37 years which is close to the College mean age of 29. Average years of schooling, measured in years of high school plus years of college, was 4.6 years. Nearly three-quarters were employed part or full time, with an average of 26 hours per week spent at work (See Appendix D). Majority (65.7%) were vocational students, while 15.4% and 18.9% were Pre-vocational and Academic students, respectively (See Appendix D).

The Control Population

Towards the end of the school year, preliminary statistical analyses indicated that adaptive counseling had had a major influence on participant achievement. However, there was insufficient variation in the levels of planning attained by participants to obtain meaningful correlation with any of the measures of success. Therefore, the need arose for a comparable group from the student body to serve control purposes in order for an assessment of component impact on student performance to occur.

A list, by language group, of all students who had indicated a natural language other than English on their college registration form was obtained. A table of random numbers was utilized to select a random sample from this list, stratified in proportion to the linguistic composition of the program group. An exception was the category "Asian" which was overrepresented in the program group in relation to their proportion in the total college enrollment. A lesser proportionate number of Spanish speakers was selected for the control group to make the category "Spanish" more representative of their proportion in the student body. Record folders were pulled for all NLOEs who remained in the active files until one month before the end of the semester. NLOE students whose records indicated they had spent more than two years in local high

schools were not included. The assumption made was that they had gained sufficient knowledge of the school system and the English language and, therefore, would not be comparable to the program group.

The control group consisted of 147 NLOEs. Nearly one-half were Spanish, 18.9% were Filipinos, 17.6% were Asians, and 12.8% were Samoans. Males outnumbered females by .75%. Average age for the group was nearly 25 years. Average educational background was 4.1 years (See Appendix D). The majority of the control group were vocational students (63.5%). Nearly one-tenth (8.8%) were Pre-vocational while 18.9% were academic students.

Program Description

The program components were founded on the principle that a holistic picture needed to be provided the NLOE student that would enable him to move from mere receiver of information to processor to decision-maker relative to his educational progress. This picture commenced with the program director's appraisal of the student's entry characteristics and skills through student self-assessment and standardized evaluation methods. It continued with an open, amicable discussion between the student and a Career Guidance counselor of the results of the evaluation, followed by counselor delineation of the areas that appeared promising for the student to explore. The student was then encouraged to use the occupational library to research and explore positions within job clusters that assessment indicated as general areas of employment most appropriate to his interests. Following the process of information gathering and analysis, the student was encouraged to make a career decision, declare a major, and prepare with the assistance of the counselor, an appropriate educational plan with options toward educational objectives such as a certificate, an A.A. degree, or transfer to a 4-year college. The resulting educational plan consisted of communications courses, adapted vocational courses, and academic courses in combinations determined by the individual student. Continuing contact with the program director and Career Guidance counselor provided the student the ability to determine which courses were consonant with his entry skills and ability and which instructors were most sympathetic to his particular learning needs. If problems arose, the student was encouraged to discuss them with the program director or peer counselors. Many situations which seemed insurmountable to the NLOE's were in actuality subject to short or long term positive resolution for the student and the college given the informed intervention of the ombudsman type program advocacy.

The guidance process was designed to enable each student to achieve equal measures of success (completion rate and grade point average) because (1) he had a realistic appreciation of his entry attributes and skills; (2) he made a career decision based on requisite information, exploration, and research; (3) when he was ready, he obtained assistance to formulate an educational plan that took into account his interests, skills, and attributes; and (4) he had on-going access to information and assistance to enable him to progress toward his educational goals.

Finally, a unique contribution provided by this program was a special communication component. As information accumulated from the broad and continuing contacts with students during the Fall semester, it became increasingly apparent that the Communications courses in which NLOE students were enrolled were not adequately accommodating all their perceived needs. Consequently, a special communication course was instituted to be taught by an instructor who had had long-term involvement with the various bilingual communities in the area. The instructor speaks Italian, Samoan, and Spanish, three of the primary first languages spoken by NLOEs in the area, had taught in local high and adult schools, had experience and knowledge of various cultures,

and is particularly attuned to the communication needs of NLOEs. This approach to the development of communication skills was organic rather than medicative. It utilized student mastery of natural language as a bridge to learning the second language. Oral, written, and reading skills were approached together to enable the NLOE to appreciate and internalize the tie-up among the three aspects of language, natural or second. The student was encouraged to work towards clear and understandable speech. In this manner, he was liberated from previous negative experiences when his particular attempts at communication in English were considered pathological and, therefore, needing treatment. Having emancipated the NLOE speaker, teacher-student interaction became more productive than usual because there was mutual respect and acceptance of each.

The Research Design

The research design which was developed in conference with Dr. Herman Loether, Program Research Consultant, following examination of preliminary results, took into consideration the need to select alternative statistical procedures to analyze the revised program. The major factors that were considered were the extreme variability in enrollment patterns and the apparent satisfaction of needs of the participants which led them all to take full advantage of the adaptive counseling and progress to the highest level of the institutional learning model.

The analytic model was delineated as follows:

1. select a representative NLOE control group from the general student body;
2. compare measures of characteristics, attributes and activities to determine similarities and differences between control and program groups;
3. compare measures of achievement between program and control groups to determine the amount and significance of the impact of the program on progress for participants;
4. analyze the differential contributions of the various program components and student enrollment patterns to improved achievement;
5. determine whether any of the personal characteristics or past educational experience at Harbor College or previous to enrollment exhibited any significant relationship to achievement;
6. ascertain a measure of affective learning attributable to program participation as seen from the student perspective; and
7. use the information generated from the above comparisons to examine the relationships among variables as predicted by the hypotheses.

Program participants were divided into two mutually exclusive subgroups in an effort to guard against the reporting of spurious relationships. The intent was to assess internal consistency of the various measures through comparison of the values exhibited by the subgroups. These two groups were identified by initial program participation in the Fall, 1976 or Spring 1977, semesters.

Data Collection

Student participants completed a Personal Inventory Form (See Appendix L) which sought information on characteristics, past experience and attributes. These included, natural language, age, sex, years of high school and college completed, source of financial support, mode of transportation and employment on- or off-campus. It also included self-assessment of speaking, reading and writing proficiency in both natural and English languages.

They were invited to assess their interests and abilities through a battery of tests (WRAT, Raven Matrix, WOW, COPS, and the STEA Test of Educational Ability-Level 5).

The test results were interpreted to them by a Career Counselor who discussed with the students the relationships of their individual interests, skills, abilities and aspirations to college offerings, career choice and educational planning. These measures were not used for research analysis as their purpose was to serve as the information base for student counselor interaction which would lead to informed decision making regarding vocational major, choice of courses and educational plan. The results of these decisions are the actions which were recorded to relate to outcome measures to assess progress.

Past Harbor College experience included the number of semesters of previous attendance, the number of units attempted and the number of units completed, plus the number of units from which the student withdrew. This last measure was required because withdrawals (W's) are not counted as units attempted and therefore are not reflected in overall unit counts or GPA measures. It also included completion of previous communication courses. Current enrollment included all of the courses in which the student was enrolled for the particular semester of initial participation. For the control group it comprised the enrollment for Spring '77 semester. It included Communication Development which subsumed English, Speech, and Reading courses; adapted vocational courses, vocational courses, total units enrolled and major. All of these measures were obtained for participants and non-participants by obtaining individual transcript copies of computerized enrollment records. Outcome measures were obtained following the end of semester grade reporting in the same manner. These measures of achievement included units completed, grade points earned for communications, vocational and adapted vocational courses, overall grade point averages and units withdrawn.

A final component of analysis was to gain an assessment of NLOE student opinions regarding the importance of selected learning objectives which motivated their attendance at the College and their estimation of personal progress in the accomplishment of those objectives. Qualitative information was derived from individual contacts with program personnel, but in the interest of quantitative support a survey instrument was constructed and mailed to all program and control group students with explanatory cover letters from the program director (See Appendix K).

Item construction was accomplished by using objectives which had been determined to be most important to LAHC students by a previous study plus those particularly pertinent to the purposes of the current program as delineated in the introduction. Statements covered areas related to personal and vocational advancement and recognition, academic progress, family and community concerns and self-concept and development.

For each item students were asked to rate on a three point Likert scale both:
1. the importance of each reason in leading to your enrollment, and
2. the amount of progress you have made through your attendance in relation to each reason.

Questionnaires were anonymous and returned to the Office of Research to avoid influencing the students by a desire to please the program personnel.

Statistical Analysis

Statistical procedures were applied to manipulate the data collected according to comparative steps outlined in the analytic model.

(1) select a representative NLOE control from the general student body.

This was accomplished by the use of the table of random numbers as previously described to eliminate bias in control group selection.

(2) compare measures of characteristics, attributes and activities to determine similarities and differences between control and program groups.

Statistical Package for the Social Sciences (SPSS) was used for all statistical manipulation of data.

Population descriptors and measures of central tendency, means, were charted for all variables within these categories to afford comparison between the program and control groups and within the program group according to Fall or Spring participation (See Appendix D).

(3) compare measures of achievement betweeen program and control groups to determine the amount and the significance of the impact of the program on progress for participants.

Multiple Regression was the statistical procedure applied to determine the differences in the measures of achievement, completion rate and GPA, between the program group and the control group. It was chosen in preference to other procedures as the information produced yields a predicted mean for program and control groups which affords a distinct amount and direction for the expected difference in achievement caused by program participation (See Appendices H and I).

(4) analyze the differential contributions of the various program component and student enrollment patterns to improved achievement;

(5) determine whether any o the personal characteristics or past educational experience at Harbor Coll ge or previous enrollment exhibited any significant relationship to achievement;

Cross tabulated descriptions of relationships to measures of achievement and to natural language categories of personal characteristics, previous educational experience, and current educational activities were charted for comparative analysis between Program and Control groups. The eta statistic was chosen as the appropriate measure of association as it accommodates for non-linear relationships and may be compared to other statistics. Correlation coefficients, Pearson's r, had been derived to compare all of the measures recorded to all measures of achievement, but none of the relationships were of sufficient strength to suggest alteration of the hypotheses (See Appendices E & F).

All of the characteristics, past experience and current activities were entered as independent variables into the regression equation through the stepwise procedure. This statistical process yields an ordering of variables according to the greatest increment of change contributed to the multiple correlation coefficient. It thus produces a listing in order of importance of the contributors to the measures of achievement (See Appendix J).

(6) ascertain a measure of affective learning attributable to program participation as seen from the student perspective.

Analysis of data obtained from the student survey was accomplished by recording frequencies of responses to each item and listing items in priority order according to magnitude of motivation. A measure of progress was obtained by combining the measures of satisfaction and importance. A matrix for rating each item in terms of satisfaction according to motivation was constructed as shown in Exhibit I. Each item was scored accordingly for each respondent (See Tables VIII & IX).

Exhibit I
PROGRESS CODING MATRIX

Satisfaction	Importance: High	Medium	Low
Much	1	2	3
Little	4	5	6
None	7	8	9

Frequencies and means were determined for each item as measures for ranking items by group response and to ascertain program strengths and weaknesses in terms of service to student determined needs.

(7) use the information generated from the above comparisons to examine the relationships among variables as predicted by the hypotheses.

All of the statistical indicators generated by the various procedures were synthesized to build a body of evidence to demonstrate support or lack of support for the hypothesized relationships.

RESULTS

Previous Harbor College Experience:

Table I

Comparison of Previous Harbor College Experience
Program and Control Groups

	Program: Fall '76 N = 88		Program: Spring N = 81		Program: Total N = 169		Control N = 147	
	#	%	#	%	#	%	#	%
PREVIOUS SEMESTERS—Mean	.875		.963		.905		3.81	
1	8	9.1	17	21.0	25	38	30	20.3
2	13	14.8	5	6.2	18	26	11	7.4
3	3	3.4	7	8.6	10	15	17	11.5
4	6	6.8	1	1.2	7	11	19	12.8
5	2	2.3	4	4.9	6	9	19	12.8
6			1	1.2	1	2	8	5.4
7							10	6.8
8							8	5.4
9 - 13							12	8.1
PREVIOUS UNITS: Mean	7.047		12.694		9.344		17.016	
0	47	57	25	25	76	45	21	17
1 - 10	9	9	12	15	21	13	28	23
11 - 20	14	16	16	20	30	18	31	25
21 - 30	9	10	10	13	19	11	21	16
31 - 40	3	3	6	8	9	5	16	13
41 - 50			2	2	2	1.2	7	6
PREVIOUS WITHDRAWALS Mean	4.046		3.272		3.667		13.322	
0	55	63.2	55	67.9	110	65.1	39	26.5
1 - 9	19	21.6	15	18.5	34	20.1	28	19.0
10 - 19	9	10.2	6	7.3	15	8.9	22	15.0
20 - 29	3	3.3	3	3.6	6	3.6	0	0.0
30 - 39	0	0.0	2	2.4	2	1.2	8	5.4
40 - 50	1	1.1			1	0.6	11	7.5

Program group mean (.905) indicated that participant experience with Harbor College was less than one semester compared to that of the control group which averaged more than three semesters (3.81). In the past, program participants had earned an average of 9.3 units while that earned by the control group averaged 17 units. Perusal of previous withdrawal records for both groups showed that, on the average, control group previous withdrawal rate was more than three and a half times higher than that of the program group.

Program Intervention

Nearly all of the program participants perceived the program service beneficial as almost everyone in the group completed the highest level of the process. One-third of the program group indicated need for and received peer (tutoring) service. Data on control group use of peer service was not available.

Adapted Vocational Education

Table II depicts participation of both groups in Bilingual Vocational Education.

Table II

Comparison of Bilingual Vocational Education
Program and Control Groups
(in hours)

	Program						Control	
	Fall '76		Spring		Total			
	N = 88		N = 81		N = 169		N = 147	
	#	%	#	%	#	%	#	%
BILINGUAL VOCATIONAL HOURS Mean	4.477		4.318		4.461		0.924	
0	43	49.4	37	45.7	80	47.3	115	77.7
1 - 3	25	28.6	20	24.8	45	26.6	34	9.5
4 - 6	11	12.6	18	22.2	29	17.1	9	6.1
7 - 9	6	6.8	6	7.5	12	7.2	5	3.5
10 - 12	2	2.3			3	1.8	1	0.7

More than one-half (52.7%) of the program participants availed of Bilingual Vocational Education courses compared to nearly one-fifth (19.8%) of the control group. Average number of student hours allotted to Bilingual Vocational Education by program participation was 4.46. Control group hours spent on Bilingual Vocational Education averaged less than one (.92).

Communication Development

Table III provides the breakdown of participation by group in communication development courses. Nearly 70% of the program participants were enrolled in communications classes. Actual units for which students enrolled ranged from 2 to 13. Average number of hours devoted to these classes was almost six hours per week. Control group enrollment in said classes was limited to 11% and average hours spent was nearly one-half hour per week.

Table III

Comparison of Communication Development Courses Taken
Program and Control Groups

	Program						Control	
	Fall '76		Spring		Total			
	N = 88		N = 81		N = 169		N = 147	
	#	%	#	%	#	%	#	%
COMMUNICATION DEVELOPMENT Mean	6.278		5.603		5.962		.497	
0 - 1	19	21.6	30	37.0	49	29.1	130	88.4
2 - 4	18	20.7	23	28.4	41	24.4	15	10.2
5 - 7	24	27.6	12	14.7	36	21.4	1	0.7
8 - 10	15	17.2	9	11.1	24	14.7	0	0
11 - 13	11	12.6	7	8.6	18	11.1	1	0.7

Accomplishment

Table IV cites all data obtained for program and control groups relative to achievement. They encompassed number of units attempted, number of units completed, and completion rate.

Table IV

Comparison of Program and Control Group Results
According to Units Attempted, Units Completed, and Completion Rate

	Program						Control	
	Fall '76		Spring		Total			
	N = 88		N = 81		N = 169		N = 147	
	#	%	#	%	#	%	#	%
UNITS ATTEMPTED Mean	11.471		11.337		11.345		10.514	
1 - 5	10	11.4	9	11	20	12	19	14
6 - 10	22	25.2	34	30	46	27	40	27
11 - 15	36	41.2	28	35	64	38	75	50
16 - 20	19	21.8	19	24	38	33	13	9
UNITS COMPLETED Mean	9.437		8.691		9.083		6.291	
0	2	2	3	4	5	3	35	23.6
1 - 5	18	21	17	21	35	21	35	23.6
6 - 10	30	34	34	42	65	38	35	23.6
11 - 15	26	30	18	23	44	26	36	24.3
16 - 20	11	9	9	11	10	12	5	3.4
COMPLETION RATE Mean	8.588		8.397		8.500		5.696	
0	2	2.3	8	9.9	11	6.5	38	25.7
1 - 20	2	2.3	2	2.5	4	2.4	6	4.1
21 - 40	5	5.7	5	6.1	10	6.0	15	10.1
41 - 60	10	11.5	9	11.1	19	11.2	11	7.4
61 - 80	10	11.5	9	11.1	19	11.2	23	15.6
81 - 100	58	66.7	48	59.3	106	62.8	55	37.2

The Program and Control groups differed slightly with respect to number of units attempted. Average units attempted in the control group was 10.5, only .8 of a unit less than that attempted by program participants. However, a distinct difference was noted between the two groups relative to number of units completed. In the program group, only 3% did not complete any units compared to nearly one-fourth (23.6%) of the control group. Program participants completed an average of 9.08 semester units while average unit completion for the control group was 6.29 units. There was also a distinct difference between the two groups with regard to completion rate. Program group completion rate was 30% better than that of the control group.

Adapted (Bilingual) Vocational Education Grades (BIVOED)

Table V details bilingual

Table V

Bilingual Vocational Education Grades
By Program and Control Groups

	Program						Control	
	Fall '76		Spring		Total			
	N = 88		N = 81		N = 169		N = 147	
	#	%	#	%	#	%	#	%
BILINGUAL VOCATIONAL GRADE Mean	273.718		252.579		263.286		228.372	
D = 50 - 149	1	1.1	3	3.7	4	15.4	3	2.1
C = 150 - 249	17	19.4	15	18.4	32	18.9	24	16.3
B = 250 - 349	13	14.7	14	17.2	27	16.0	10	7.9
A = 350 - 400	8	9.2	6	7.4	14	8.3	6	4.1

Distinct differences were found between bilingual Vocational Education grades obtained by the program and control groups. The few members of the control group (19.8%) who enrolled by chance in bilingual Vocational Education classes averaged 2.2 (C) compared to 2.6 (B) for those in the program. Also a higher proportion in the program group received a grade of B or better.

Communication Grades

Table VI details grades obtained by the program and control groups in Communication courses.

Table VI

Distribution of Communication Grades
Program and Control Groups

	Program						Control	
	Fall '76		Spring		Total			
	N = 88		N = 81		N = 169		N = 147	
	#	%	#	%	#	%	#	%
COMMUNICATION GRADE Mean	265.283		261.763		264.687		114.86	
W/F = 0	27	31.0	43	53.1	70	41.4	139	93.9
D = 1 - 149	1	1.1	1	1.2	2	1.2	3	2.0
C = 150 - 249	28	32.1	15	18.5	43	25.5	5	3.4
B = 250 - 349	21	24.0	18	22.1	40	23.7	-	-
A = 350 - 400	10	11.4	4	4.9	14	8.3	1	0.7

As previously mentioned, more than one-half (58.7%) of the students in the program completed Communications courses compared to only 6.1% of the control group. Program participants averaged 2.6 (B) in the Communications courses. Average communication grade for the control group was 1.1 (D) and only 4.1% received a grade of C or better.

Grade Point Average

Table VII provides grade point averages (GPA) achieved by both program and control groups.

Table VII

Disposition of Overall Grade Point Average
Program and Control Groups

	Program						Control	
	Fall '76		Spring		Total			
	N = 88		N = 81		N = 169		N = 147	
	#	%	#	%	#	%	#	%
GPA Mean	272.9		259.3		267.0		182.635	
D = 50 - 149	1	1.1	4	4.9	5	3.0	8	5.4
C = 150 - 249	36	40.9	27	33.3	63	37.3	51	34.5
B = 250 - 349	33	37.5	36	44.4	69	40.8	46	31.1
A = 350 - 400	15	1 .0	11	13.6	26	15.4	7	4.7

As can be seen in the table above, program participants had distinctly better grade point averages than the control group. Program participants averaged 2.5 (B) compared to control group average of 1.8 (C). In addition, the proportion of students who received grades of C or better was much higher in the program group.

Post-School Year Survey

Table VIII depicts participant responses to a motivational survey (Appendix K) distributed in May, 1977. Items were ranked in order of the largest percent of respondents assigning "High" importance to the item as a reason for college attendance. Nearly all (90%) of the Program participants gave top priority to improvement of proficiency in English. Following in importance were effectiveness in accomplishing goals (89%) and coping effectively with life situations (81%). More than half (61%) felt learning how to get a job was an important reason for attending college. A nearly equal proportion (59%) of the respondents felt enrollment would help them develop analytical skills, gain recognition in their chosen fields, and develop self-discipline. More than half (58%) placed importance on academic and vocational courses for employment and advancement as reasons for enrollment. Fifty-six percent (56%) felt improvement of self-confidence sufficiently important to motivate them to enroll. Fifty-one percent (51%) regarded enrollment as a way of gaining recognition from their particular communities. Significant proportions (42% and 37%, respectively) perceived "fitting in" this country by understanding and respecting its people's values important enough as reasons for enrollment. Of least importance to the respondents was having fun in their classes.

Table VIII

PROGRAM GROUP RESPONSE TO
POST-ACADEMIC YEAR QUESTIONNAIRE
WITH MEASURES OF MOTIVATION AND SATISFACTION GAINED

REASONS FOR ENROLLMENT

MOTIVATION				SATISFACTION		
HIGH	MEDIUM	NONE		HIGH	LITTLE	NONE
%	%	%		%	%	%
71 (90%)	07 (09%)	01 (01%)	To improve my ability in English: * Writing	61 (74%)	16 (19%)	06 (07%)
72 (89%)	09 (11%)	00 (00%)	* Speaking	63 (77%)	18 (22%)	01 (01%)
73 (81%)	16 (18%)	01 (01%)	* Reading	69 (79%)	18 (21%)	00 (00%)
67 (76%)	19 (22%)	02 (02%)	To increase effectiveness in accomplishing my goals.	54 (61%)	31 (35%)	03 (03%)
62 (71%)	23 (26%)	03 (03%)	To cope effectively with life situations.	48 (56%)	36 (42%)	02 (02%)
49 (61%)	18 (22%)	14 (17%)	To find out how to get job.	45 (55%)	25 (31%)	12 (15%)
48 (59%)	28 (34%)	06 (07%)	To develop analytical thinking.	30 (59%)	27 (32%)	08 (09%)
49 (59%)	24 (29%)	10 (12%)	To develop self-discipline and effective time management.	36 (43%)	38 (45%)	10 (12%)
50 (59%)	20 (24%)	15 (18%)	To gain recognition as an expert in my field.	13 (16%)	34 (42%)	35 (43%)
50 (58%)	33 (38%)	04 (05%)	To take academic courses for advancement.	43 (51%)	38 (45%)	04 (05%)
48 (58%)	23 (28%)	12 (15%)	To take vocational courses for advancement.	40 (50%)	26 (33%)	14 (18%)
50 (56%)	35 (39%)	04 (05%)	To improve my self-confidence.	65 (74%)	19 (22%)	04 (05%)
43 (51%)	22 (26%)	19 (23%)	To gain recognition in my community.	21 (25%)	36 (43%)	27 (32%)
35 (42%)	26 (31%)	23 (27%)	To understand this country's system and values.	17 (20%)	41 (49%)	26 (31%)
30 (37%)	40 (49%)	12 (15%)	To appreciate and respect other people's values.	42 (51%)	36 (43%)	06 (06%)
28 (33%)	39 (46%)	18 (21%)	To improve my ability in math.	24 (29%)	44 (53%)	15 (18%)
27 (33%)	34 (42%)	21 (26%)	To improve my natural language.	20 (24%)	46 (56%)	16 (20%)
22 (28%)	22 (28%)	34 (44%)	To please my parents.	25 (32%)	29 (37%)	24 (31%)
11 (13%)	24 (29%)	47 (57%)	To have fun in a variety courses.	10 (12%)	27 (33%)	44 (54%)

Table IX depicts perception of respondents relative to progress made vis-à-vis their objectives for enrollment.

Table IX

Ranking of Program Student Learning Objectives
According to Progress Matrix

MEAN	RANK	OBJECTIVE
1.94	1	To improve my ability in English reading
2.01	2	To improve my ability in English speaking
2.19	3	To improve my ability in English writing
2.39	4	To improve my self-confidence
2.53	5	To increase effectiveness in accomplishing my goals
2.74	6	To cope effectively with life situations
3.08	7	To take academic courses for employment
3.13	8	To develop analytical thinking
3.43	9	To appreciate and respect other people's values
3.47	10	To find out how to get job
3.57	11	To develop self-discipline and effective time management
3.67	12	To take vocational courses for employment
4.75	13	To improve my ability in math
4.91	14	To improve my natural language
5.01	15	To gain recognition in my community
5.13	16	To understand this country's system and values
5.18	17	To please my parents
5.30	18	To gain recognition as an expert in my field
6.62	19	To have fun in variety courses

Code Range 1 to 9 Highest to Lowest

It was apparent that respondents perceived greatest satisfaction in their progress toward (1) proficiency in English; (2) improving self-confidence; (3) increased effectiveness in accomplishing their goals; and (4) coping effectively with life situations.

VARIABLE WEIGHTS

Crosstabulated relationships of the personal characteristics and attributes and educational background and activities to the achievement measures demonstrated the following results as shown in Table X.

Table X

Comparison of Measures of Association
Between Program and Control Group

	PERS. CHARACTERISTICS					CURRENT ED. ACTIVITIES				
	COMPRATE*		GPA			COMPRATE*		GPA		
	P	C	P	C		P	C	P	C	
Language Group	.179	.239	.217	.157	Major	.110	.233	.048	.206	
Age	.130	.289			Peer Service	.050		.121		
Ed Background	.135	.236	.183	.144	Voc Ed Hours	.141	.206	.110	.378	
Sex	.045	.047	.049	.131	Communication Development	.403	.253	.217	.185	
English Ability	.136		.194							
Nat Lang Ability	.056		.193			ACHIEVEMENT MEASURES				
Hours Work/Week	.134		.142							
	PREVIOUS LAHC EXP.				Voc Ed Grade	.209	.436	.393	.437	
					Communication Grade	.370	.118	.550	.113	
Previous Semesters	.155	.342	.246	.343	GPA	.442	.777			
Units	.099	.234	.216	.324	Completion Rate			.454	.787	
Withdrawals	.204	.89	.159	.147						

Personal Characteristics

Relationships of personal characteristics to completion rates as demonstrated by the eta values indicated that natural language and educational background were more strongly associated to successful completion for the control group than for participants. Sex, English ability, natural language ability, and the hours of employment per week all showed very little relationship to completion rate.

A slightly higher though still weak association was indicated to GPA by sex, English ability, natural language ability, and hours of employment. Natural language and educational background showed a slightly higher association to GPA for program participants than for the control group.

Previous LAHC Experience

The strength of association of previous experience to completion was twice as strong for control students as for those served by the program as indicated by previous semesters and previous units completed. Previous withdrawals, a negative

*Completion Rate

measure, did not show a difference. A similar pattern prevailed for GPA's. There was a stronger relationship indicated for the control group than for participants between GPA and previous semesters and previous units and little difference for previous withdrawals.

Current Educational Activities

Designation of major had a stronger influence on both completion rate and GPA for the control group than for program. Students in the control group who had designated a vocational major did better than either the prevocational or the academic majors in terms of completion rate. Prevocational students and Vocational students in the program had a larger percentage completing 100% of their course work than did those who had declared an Academic major. However, the percentages of students in all classifications of major in the program were at least double those of the non-served group in terms of total completion. Grade point averages for all classifications of major were also distinctly higher for the program than for the control group (See Appendices D & F). The number of hours of peer counseling demonstrated little relationship to either completion rate. Hours of Bilingual Vocational Education completed had a stronger influence on both completion rate and GPA for students who enrolled from the control group than for those in the program. Communication Development had the major impact on completion rate for program participants and an important though lesser influence for students who did not receive diagnostic and prescriptive assignment (control NLOE's). In its association to overall GPA, the number of units of communication development exhibited a smaller differential between program and control students.

Achievement Measures

The interrelationships among achievement measures reflect the associations just described. The grade received in Adapted Vocational Education had the strongest association of all variables on Completion Rate for control students and a lesser influence for participations. It had a similar relationship to overall GPA.

The order of relationships was reversed between communications grades and completion rates and GPA. Finally, the relationship between the two major measures of achievement, Completion Rate and GPA was very strong for the students not served who were in the control group and far less for program participants.

Examination of the contributions to successful achievement as determined by application of the stepwise regression procedure using the total number of students in the study reveals the following ordering of variables. The program components, personal attributes and educational activities which demonstrated the most significant positive influence on completion rates according to increase in the multiple regression coefficient were as follows (See Appendix H). Program participation, Communication development, Adapted vocational instruction, and Educational background. In terms of their relative strength of positive influence on grade point averages as indicated by change in the multiple correlation coefficient the ordering was Program participation, Adapted vocational instruction, Communication development and Educational backgrond (Appendix I). Multiple R's were .405 for completion rate and .392 for GPA with F ratios significant beyond the .001 levels.

Operational Hypothesis:

1. Completion rates for NLOE students in the program (p) will be consistently higher than those of a comparable randomly selected control (c) group at a measure beyond the .001 significance level.

Results of the regression analysis (Nie, et. al., 1975, p. 373) indicate that the mean completion rate which may be expected for NLOE students not served by the program is 58.3%. The mean completion rate for NLOE students who participated in the program is 83.7%. The difference between the two means represents a 25.4% improvement in terms of the overall possible range of 0 to 100% and a 44% increase over the expected completion rates for non-served NLOE students. See Appendix H for complete statistical development of the hypothesis. Support for the hypothesis that program participation is associated with improved completion rates was significant beyond the .001 level as indicated by an F ratio of 39.43.

2. Grade point averages (with a range of 0 to 4.0) for NLOE students in the program (p) will be consistently higher than those of a comparable randomly selected control (c) group at a measure beyond the .001 significance level.

Regression coefficients indicate that the mean overall grade point average which may be expected for NLOE students regularly enrolled in the college is 1.83 (a low C letter grade). Program participants have an expected mean GPA for the semester of 2.59 (a low B). The difference between the expected mean GPA's represents a 19% improvement in terms of the total range of 0 to 4.0 and 42% improvement in the expected GPA for non-served NLOE students. Support for the hypothesis that program participation is associated with improved GPA was significant beyond the .001 level as indicated by an F ratio of 43.47.

3. Diagnostic assessment and prescriptive assignment to educational services appropriate to individual student attributes and interests causes reduction in time loss and diminished achievement for NLOE students and higher retention for the College.

3a. Communication Development (CD) will be demonstrated to be the major component contributing to successful achievement and retention for NLOE students if they are appropriately enrolled following diagnostic and prescriptive counseling.

Results generated by the stepwise regression procedure indicate that Communication Development was second after Program Participation in contributing to the improvement in completion rates for NLOE students. It was preceded only by program participation and adapted instruction in contributing to improved GPA, although the increments of change were small.

Table XI

Comparison of Measures of Association for
Communication Development and Grades to Achievement

	Communication Development		Communication Grade	
	Program	Control	Program	Control
%Completion Course	71%	9%	59%	6%
Mean	6.0	0.5	264.3	114.9
GPA				
Eta	.314	.180	.550	.113
Rank	2	5	1	11
CR				
Eta	.428	.253	.370	.118
Rank	1	2	2	10

Comparison of all measures related to communication development as shown in Table X support the hypothesized relationships. Program students average CD 5½ levels above the control group. GPA's indicate that the average grade for those in the control group, who complete a communications course, is 1.115 or D (less than passing). Average for program is 2.64 (low B) above passing.

The eta measure of association ranks highest for CD of all independent variables (for both GPA and Completion Rate dependent) for the program group. Program participants have chosen their courses with the help of diagnostic and prescriptive assignment. For the control group the etas indicated a much lesser degree of association and the rankings were second for CR and fifth for GPA.

According to the students' reported perceptions, communications development, reading, speaking and writing, were the most important objectives for their enrollment and those for which they made the most progress.

3b. Participation in courses adapted to accommodate learning needs of NLOE students will be demonstrated to improve their performance and college retention.

Results obtained from stepwise regression indicate that after Program participation, adapted vocational courses (BVE) were the major contributor to improved GPA and second only to communication development in their influence on completion rates (See Appendix I). As noted, increments of change are small. Variables listings in the

Table XII

Comparison of Measures of Association for Bilingual Vocational Education and Grades of Achievement

	Bilingual Voc. Ed. Course		Bilingual Voc. Grade	
	Program	Control	Program	Control
% Completing Course	53%	22%	58.6%	30.4%
Mean	4.5	0.9	263.3	228.4
GPA				
Eta		.378	.393	.437
Rank		1	1	1
CR				
Eta	.141	.206	.208	.436
Rank	7	8	3	2

summary tables indicate that of the 28 variables for which data was collected and their logical combinations Adapted Vocational Education was second only after Program Participation as a contributor to GPA and third after Communication Development as a contributor to GPA for the total number of students studied.

The hypothesized relationship between Bilingual Vocational Education and dependent measures of achievement is supported by the information reported. The average participation by program group was 4.5 units and 0.9 for control. However, those control students who did engage in adapted instruction achieved and average grade of 228.4 (C+) as compared to program average of 263.3, a difference of only 34.9 grade points. The etas indicate a stronger association to positive achievement for the control group than for the program group. This is the one program component in which the control group participated, if only to a limited extent. Those who did enroll without program counseling achieved greater success than others in control group.

3c. Previous experience at LAHC for NLOE students will have a lesser degree of association to achievement measures for those served by the program than for the control group.

Table XIII

Comparison of Measures of Association of Previous LAHC Experience to Achievement

Group Membership	PREVIOUS LAHC EXPERIENCE Semesters	Units	Withdrawals
Program Mean	.915	9.34	3.67
GPA eta	.246	.216	.159
CR eta	.155	.099	.204
Control Mean	3.81	17.02	13.32
GPA eta	.343	.324	.147
CR eta	.342	.234	.187

Information in Table XIII shows that program participants had lesser previous Harbor College experience as indicated by all measures, semesters attended and units completed and withdrawn than did the control group. Their mean completion rate for previous semesters was 60%, which approximates the 58% predicted mean completion rate for non-participants. Comparison of measures of association, etas, indicates that previous LAHC experience is more strongly related to improved completion rates and GPA for control students than for program participants.

In terms of the hypothesis, this means that participants are less dependent on learning from long term past experience to be able to use educational services to their advantage. Previous withdrawals is a measure of negative rather than positive action and does not show a differential relationship to achievement between the two groups.

All of the hypothesized relationships have been supported by the information generated by the analyses. Prescriptive assignment into communication and adapted vocational courses improved student achievement and saved them many semesters of low achievement theoretically attributable to lack of requisite information and understanding.

4. Self-concept of the NLOE student participants will be improved by the program through provision of "visible opportunities for advancement" and "feedback processes which enable (them) to see the consequences of their actions and how the action has achieved the consequences" (Adams, 1972).

Responses to the student survey indicate that after the progress in communication development, improvement in self-confidence, increased effectiveness in accomplishing goals and in coping with life situations were the perceived areas of greatest progress for NLOE program participants. These are all attributes which relate to affective

growth and constitute major attributes of the "self-actualizing" learner as developed in Year book 1962: NEA Association for Supervision and Curriculum Development (Coombs, 1962). Their high level of ranking supports the general hypothesis of the learning model in that they encompass the activities at the top of the learning taxonomy that according to the model should be associated with improved achievement.

DISCUSSION

According to the data obtained from the research, program group completion rates and grade point average (GPA) were significantly and consistently higher than those of a comparable, randomly selected group of NLOE students who did not avail of program service. The summary tables which enumerate in order of importance all independent variables in the study, indicated that Program Service constituted the greatest weight and therefore, the most meaningful contribution to both the higher completion rates and grade point averages achieved by program participants.

Better achievement rates, measured in terms of completion rate and GPA, are interpreted to be a function of program participants' informed use of the system based upon knowledge about themselves (through self-assessment), their skills and strengths (through evaluation and sessions with Career Guidance counselors and Program Director), and referral-placement in appropriate courses and areas so that they are enabled to plan a progression of learning activities which lead to a foreseeable goal. Possessing knowledge of themselves, knowing their interests, appreciating the current levels of their skills, and being apprised of the alternatives open to them, program participants were provided with the basic elements of decision. Experience has shown, and this research supports it, that when decision is arrived at conjunctively between student and adviser and when that decision has all the above mentioned requisites or elements, that decision is more consequential for the student than a decision which is imposed. The explanation for this and the persistence and selectivity that invariably occurred in the program participant's learning process appeared to be that he acquired an appreciation for his own contributions to the fulfillment of his goals. Here, information is germane to the NLOE's understanding of where he is and how he stands and will thereby be more properly utilized to assist him to move towards the direction of his choice. The goal of program service has always been and continues to be self-actualization. The improvement of grade point average and completion rates on the part of program participants are construed as forward movement to self-actualization. However, completion rates and grade point average for the control group did not appear to reflect movement toward comprehension of the meaning and consequences of withdrawal. In their case, there appears to be no linkage between withdrawal from certain courses and the aspiration to perform better in the remaining courses. Thus, the higher the withdrawal rate, the lower the GPA and completion rates for the control group. It would appear then that given the same program service, control group completion rate could be expected to rise significantly (44% increase).

Following in importance of contribution to higher completion rates and grade point average was Communication Development. This result allineates with the high priority which students placed on improvement of their proficiency in English (Tables X and and XI). This appears to coincide with current thinking among instructors that successful achievement in courses by NLOEs is contingent upon student mastery of the language utilized as the medium of classroom instruction. Among the program participants completion of courses in communications appeared to be closely associated with the positive perspective of the instructors vis-à-vis the learning of a second language, the students, and the grade point average earned. Thus, the more units earned by a student in Communications, the higher the grade point average he earned

at the end of the semester. A similar effect is seen in the control group; however, with so few of the students having prepared in Communications Development courses, grade point averages for the group were negatively affected.

Adapted Bilingual Vocational Education (BIVOED) was third in importance and contribution to higher grade point average and completion rates. It is apparent that participation in a bilingual vocational education class was not as crucial a factor for program participant achievement as it was for control group overall scholastic performance. For members of the control group who, by chance, enrolled in bilingual Vocational Education classes, the adapted instruction and grades they received in those classes had sufficient, positive influence on their grade point average. Difference in impact of bilingual Vocational Education grade on program and control grade point averages was quite significant (eta_p = .11012 versus eta_c = .37826). It appears, therefore, that for NLOEs who had received adequate preparation in the second language through Communications Development courses and who did well in the said courses, adapted instruction is welcomed and helpful but not vital. However, for those NLOEs who were placed in courses without the requisite second language base, an adapted course was most important to their successful achievement. In many cases, the control group's grade point average was substantially raised by the bilingual vocational education grade.

Fourth in importance was the NLOE's educational background, that is, years of high school plus years of college, if any. This suggests that although educational background is regarded normally as an important contributor to scholastic success and progress, in both program and control groups, it was found to have merely some weight. However, the increment was too small to be meaningful. This further suggests that the significance attached to educational background becomes negligible when a holistic program works with NLOEs to ascertain their levels, places them accordingly in appropriate courses where they could succeed, and assist them in attaining their educational goals.

Previous Harbor College units earned did not appear as important to program participants as it did to the control group when examined as a contributor to higher completion rates and grade point averages. With relatively lesser experience in college, program participants were able to achieve better than their counterparts from the control group. Control group completion rate and grade point averages were found to be closely associated with Previous Harbor College units. This suggests that the Control group utilized previous Harbor College experience to learn about themselves and the institution. This group's records indicated that it is not uncommon of NLOEs to take several semesters-three, five, seven, even eight--before the understanding required to function effectively in terms of course completion and grade point average is gained. This experience seems drawn-out and unwarranted when compared with the progress made by program participants with comparatively less investment in time. Again, mitigation of the problem for the control appears to be imbedded in a well-articulated program that would carry them through comparable program group achievement experience.

Previous Harbor College semesters, like Previous Harbor College units, was not a significant contributor for program participants to better completion rates and grade point average. With mean for program group of .905 and mean for control group 3.81, it is obvious that length of experience in an educational system does not necessarily benefit NLOEs if the experience is not properly mediated and understood by them. In general, the relationship between higher grade point average and completion rate on the one hand, and previous semesters on the other, for program group, was not apparent primarily because only 66 if 169 participants have had previous Harbor College

semesters which resulted in a highly inflated eta (.24600). On the other hand, the association between grade point average and completion rates and previous rates for the control group was relatively higher (eta = .34300). The fundamental difference between the shorter experience of the program group and the relatively longer experience of the control group is that within the shorter time span that the program participants were enrolled, provision was made for them to obtain understanding of the educational process, develop appreciation of their college, and to select appropriate options for successful scholastic achievement. Inasmuch as the control group's longer experience played a very small part in their completion rate and grade point averages, it can be inferred that successful achievement during the critical first semesters was impeded due to the absence of a coordinated program that could provide them with the requisite information and understanding vital to their execution of appropriate actions. Individuals have been known to benefit from trial - and - error experiences but if the college can save the NLOE student numerous failure - ladden semesters, it could mean the difference between independence and long-term, if not permanent, inadequacy.

Recommendations

The results of this research demonstrated that the interactive learning model (Student Institution Progress through Information Understanding Appropriate Action) has improved achievement for NLOE students in both affective and cognitive growth, increased teaching effectiveness, and improved retention for the college. Insights gained from the study indicate that the integration of activities and resources yields positive results provided there is programmatic assurance that all pertinent information is shared by the students, the College, and the community and that they have intermutual understanding of the information provided.

On the basis of our findings, we recommend the following:

1. Because the student comprises "the heart of the total educational enterprise" (Mitchell and Saum, 1962) and education should be singularly devoted to maximizing individual potentials, College resources need to be allocated to a vital, continuing program service that equalizes opportunity for successful achievement by the NLOE student, an increasingly visible entity in the College. If it is to be effective, the program needs to have the following components:

   a. An on-going Information Exchange that provides continuity for the dissemination of information to NLOEs. Through the information exchange, coordination and use of college services would be effected, activities which have been demonstrated to improve student achievement and retention. Among its finer points could be:

      i. sharing of research findings with all self-identified NLOE students;

      ii. development and implementation of a 1-unit orientation course for all NLOE students which delineates the institutional learning process in terms of behavioral (performance) objectives;

      iii. addressing the College need for information by providing encouragement and incentives for administration, faculty, and staff to use the techniques and procedures that have been demonstrated to improve achievement and retention;

iv. provision of diagnostic assessment of communication skills which involves the NLOE student as a co-evaluator and decision maker;

v. strong recommendation of prescriptive assignment to a program of Communications Development based on individual student profile of abilities, interests, skills, and time frame;

vi. an ombudsman whose responsibilities entail communication with all departments and all NLOE students to prevent difficulties from evolving into unresolvable issues and complaints;

b. Because very few members of the faculty have adapted courses to the needs of NLOEs, college resources need to be allocated and encouragement proffered to the continued adaptation of course content, approaches, and delivery systems by interested faculty to institute appropriate changes that reflect a variety of learning styles.

2. The Program Service needs to be in constant communication with the bilingual communities through activities that encourage interaction and orchestration of interests among the communities, students, and College. Such activities provide the basis on which to build a broader program defined by the understanding gained by the three aforementioned entities. Specifically, components could include:

a. Sharing the results of this study with the bilingual advisory committees, which approved initiation of the research proposal, to obtain their responses, thoughts, and recommendations;

b. Reporting of results to all NLOE students on campus to encourage greater participation in continuing services

c. Supporting and assisting interested faculty to communicate with representatives of the bilingual communities to make course adaptation as accommodative as possible of NLOE students' unique learning needs; and

d. Utilizing the outreach capabilities of bilingual advisory councils to make their respective communities cognizant of the benefits that could accrue to those who would avail of Harbor's adapted offerings campus and outreach. Dissemination of information need not begin with enrollment. All avenues for information dissemination of college offerings need to be utilized through active, effective, and innovative Outreach methods.

3. A training program needs to instituted for all faculty, not only Vocational Education and Communications instructors, to work better with NLOE students. Research findings have demonstrated that NLOEs performed better and were retained in courses mediated by faculty who possess an appreciation for the complexities and difficulties associated with second language acquisition, an appreciation of their uniqueness, and who are predisposed to providing the climate of learning they needed to explore and grow.

4. A training program needs to be instituted for counselors to adapt counseling to suit the needs of NLOE students. NLOE counseling needs to foster a climate where difference is considered to be both good and desirable. At the same time, NLOE counseling needs to provide opportunities for students to become involved with the College to understand themselves and to become part of what is taking place so that they feel that in some way they are the ones deciding their future.

5. As the results of the research showed that the majority of NLOEs served by the program and who benefited from it were Vocational majors and as Vocational Education continues to be a primary vehicle for the NLOE to positively impact the system, the College needs to further stimulate the occupational areas so that they, too, could respond fully in the process of maximizing individual NLOE potentials.

6. As the results of the research showed that improved college retention and grade point averages of NLOEs could be effected with the use of in-house resources, it is deemed essential that coordination of all available college resources be strengthened and supported by the institution itself if college personnel are to explore creative ways of using in-house resources.

It is the belief of the researchers that the interactive model of learning proposed and tested in this study could become systemwide only if the above recommendations are coordinated. It is also held that only through the systematic utilization and adaptation of existing college resources could opportunities for successful scholastic achievement become equalized for the NLOE segment of the college student body. The research found that the NLOE student stayed in class and achieved when he perceived learning as having meaning for himself. If individual achievement and maximizing of individual potentials are goals worth striving for, then this learning model deserves appropriate and immediate implementation.

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LOS ANGELES HARBOR COLLEGE
Prime Service Area

POPULATION CHARACTERISTICS

ZIP CODE:	CARSON	GARDENA	HARBOR CITY	LOMITA	P. V. PENINSULA	SAN PEDRO EAST	SAN PEDRO WEST	TORRANCE	WILMINGTON	TOTAL
	90745-46	90246-49	90710	90717	90274	90731	90732	90501-2	90744	
TOTAL POPULATION:	87,619	51,230	13,469	20,238	49,937	63,162	35,292	30,906	38,034	389,907
Female	44,199	26,127	6,500	10,523	25,468	22,010	17,998	15,762	19,160	50.7%
Male	43,420	25,103	6,969	9,715	24,469	21,152	17,294	15,144	18,874	49.3%
AGE:										
Median	21.8	32	23.5	28	34	30	31	25	25	29
Under 19	47%	33%	42%	34%	40%	35%	31%	40%	41%	
19-24	10%	16%	11%	12%	3%	8%	8%	12%	11%	
25-44	30%	25%	28%	25%	28%	23%	33%	25%	24%	
45-59	5%	14%	12%	16%	22%	19%	15%	14%	14%	
Over 60	6%	12%	7%	13%	7%	15%	13%	9%	10%	
ETHNICITY										
Asian	-0-%	24%	4%	2%	1%	3%	1%	6%	7%	6.5%
Black	20%	4%	6%	-0-%	-0-%	3%	1%	8%	7%	14.2%
Hispanic	17%	15%	17%	14%	3%	24%	16%	28%	47%	18.6%
Pacific Island	8%	-0-%	7%	1%	-0-%	1%	1%	3%	4%	
White	54%	57%	66%	93%	96%	69%	81%	55%	35%	59.5%
INCOME:										
Median	$11,694	$12,386	$12,213	$10,126	$24,180	$ 8,987	$13,718	$10,652	$ 8,190	$10,430
Poverty	8%	8%	7%	9%	-0-%	10.4%	3%	8%	17.5%	
EMPLOYMENT:										
Pop. Employed	32%	47%	33%	39%	36%	33%	36%	37%	31%	38%
Professional & Mgt	20%	22%	23%	12%	63%	10%	13%	18%	10%	20%
Sales	5%	15%	6%	8%	12%	6%	12%	4%	2%	
Clerical	18%	15%	20%	20%	12%	18%	20%	17%	10%	
Skilled Voc.	40%	35%	32%	36%	7%	34%	35%	46%	49%	
Labor & Household	6%	4%	7%	3%	3%	20%	10%	7%	13%	
Service	11%	10%	12%	10%	3%	13%	10%	9%	12%	
EDUCATION:										
Average	12.1	12	12.3	11.7	16	11.2	13	12	10.8	12 year
Under 8th	20%	18%	17%	21.5%	-0-%	30%	10%	22%	34.4%	
ENROLLMENT FALL '76	1,889 (15%)	639 (5%)	592 (5%)	563 (4%)	2,372 (19%)	1,703 (13%)	1,031 (8%)	310 (2%)	994 (8%)	12,668
% OF POPULATION	2.2%	1.2%	4.4%	2.8%	4.7%	3.9%	2.9%	1%	3%	3.0%

LOS ANGELES HARBOR COLLEGE
COMMUNITY ENROLLMENT CHARACTERISTICS

SPRING 1977

CITIES:	CARSON	GARDENA	HARBOR CITY	LOMITA	P. V. PENINSULA	SAN PEDRO EAST	SAN PEDRO WEST	TORRANCE	WILMINGTON	OTHER	TOTAL
ZIP CODE:	90745-46	90246-49	90710	90717	90274	90731	90732	90501-2	90744		
TOTAL POPULATION:	1,889 (15%)	639 (5%)	592 (5%)	563 (4%)	2,372 (19%)	1,703 (13%)	1,031 (8%)	310 (2%)	994 (8%)	2,575 (20%)	12,668
Male	52%	59%	48%	47%	35%	48%	45%	51%	56%	54%	48%
Female	48%	41%	52%	53%	65%	52%	55%	49%	44%	46%	52%
AGE:											
Under 21	702 (37%)	316 (49%)	172 (29%)	133 (24%)	838 (35%)	590 (35%)	401 (39%)	101 (33%)	301 (30%)	691 (27%)	4,245 (34%)
21 - 25	317 (17%)	138 (22%)	109 (18%)	124 (22%)	212 (9%)	383 (22%)	172 (17%)	57 (18%)	222 (22%)	474 (18%)	2,208 (17%)
26 - 35	528 (28%)	123 (19%)	176 (30%)	199 (35%)	337 (14%)	487 (29%)	218 (21%)	85 (27%)	322 (32%)	696 (27%)	3,171 (25%)
36 - 50	301 (16%)	41 (6%)	101 (17%)	74 (13%)	705 (30%)	161 (9%)	159 (15%)	53 (17%)	104 (10%)	473 (18%)	2,172 (17%)
50+	41 (2%)	21 (3%)	34 (6%)	33 (6%)	280 (13%)	82 (5%)	81 (8%)	14 (5%)	45 (5%)	241 (9%)	872 (7%)
ETHNICITY:											
Asian/Pacific Is.	5%	11%	3%	1%	1%	2%	1%	4%	4%	1%	3%
Black	6%	3%	3%	-0-	-0-	1%	1%	3%	2%	4%	3%
Hispanic	5%	4%	3%	4%	1%	8%	3%	5%	12%	2%	4%
Indian	1%	1%	1%	2%	1%	1%	-0-	1%	1%	1%	1%
White	81%	81%	14%	15%	17%	12%	17%	13%	7%	8%	12%
Other	76%	73%	76%	78%	79%	77%	77%	74%	74%	84%	78%
TOTAL DAY ENROLLMENT:	1,006 (53%)	439 (68%)	320 (54%)	236 (45%)	1,216 (51%)	980 (58%)	590 (57%)	157 (51%)	555 (56%)	1,065 (42%)	6,584 (52%)
Full Time	33%	40%	28%	26%	27%	35%	32%	31%	34%	21%	29%
Part Time	20%	28%	26%	19%	24%	23%	25%	20%	22%	21%	23%
EVENING ENROLLMENT TOTAL:	883 (47%)	200 (32%)	272 (46%)	307 (55%)	1,156 (49%)	723 (42%)	441 (43%)	153 (49%)	439 (44%)	1,510 (58%)	6,084 (48%)
Full Time	8%	4%	5%	8%	1%	5%	4%	5%	7%	3%	4%
Part Time	39%	28%	41%	47%	48%	37%	39%	44%	37%	55%	44%
LABC SPRING 1975 ENROLLMENT # & %	1,730 (15.7%)	729 (6.6%)	570 (5.2%)	493 (4.5%)	1787 (16.2%)	1537 (13.9%)	988 (9%)	576 (5.2%)	1028 (9.3%)	1,597 (14.4%)	11,035
% OF POPULATION:	2.0%	1.4%	4.2%	2.4%	3.6%	3.6%	2.8%	1.9%	2.7%	- -	3.0%

(Preliminary)
REPORT # 75-1
Summary

LOS ANGELES HARBOR COLLEGE
Office of Institutional Research

TITLE: COMMUNITY EDUCATIONAL NEEDS ASSESSMENT SURVEY:
MEXICAN AMERICAN COMMUNITY

The Harbor Area Mexican American community was surveyed in Summer 1975 as the first phase of a comprehensive assessment of the educational interests of the Los Angeles Harbor College Service area.

The Intent of the survey was to ascertain the perceptions common to this particular self-identified segment of the general population regarding college service in the functions of: 1) setting of goals; 2) communication with the community; 3) counseling; and 4) curricular offerings (content, time, location).

The Rationale to obtain considered responses from a sample representation of the broad spectrum of opinions held by Mexican Americans of all socio-economic and educational levels was to solicit the assistance of organizations whose clientele was drawn from all of the different strata.

33 community organizations and 4 day and 2 adult schools were visited by the team of Spanish-speaking professional and student interviewers.

The intent and current programs were explained in English and Spanich, questions were answered and assistance provided in understanding and completing the survey instrument.

A total of 451 responses were obtained from persons living predominantly in Wilmington (171), San Pedro (67), and Carson (63), but also in other sections of the service area.

The age (101 under 17 to 36 over 50), income (122 under $4,000 to 26 over $16,000), educational (40 less than 8th, to 19 MA and higher) and occupational distributions of respondents indicates that the broad range of perspective sought was in fact achieved.

The questionnaire used asked respondents to indicate on a 4 point scale their estimation of need (or lack of it) on specific items within the stated functions.

Results from completed questionnaires:
279 respondents identified themselves as Mexican American.

Goals:
A strong need was expressed by:
87% for more community participation in setting goals
85% for more emphasis on ethnic and cultural interests in the community
*66%+ for more minority representation on staff, particularly for instructors

*Computer printout incomplete

Communication:
A strong need was expressed by:
84% for better communication between College and community by mailings, newsletters and mailings, and
68% better communications through community meetings.

Counseling:
A strong need was expressed by:
80% for more opportunities to talk individually to counselors at the College.
75% for more opportunities to talk individually to counselors in the community.
Types of counseling desired in order of preference were:

86% on the job training	76% career planning
81% job placement	75% financial aids
80% job advancement	75% self-confidence
79% work-study programs	71% drug and alcohol abuse
78% extended opportunity programs	71% marriage and family counseling

INSTRUCTIONAL PROGRAMS:

Expansion of Outreach (off campus) Program:
A strong need was expressed in order of preference for :

80% English for none English speakers	71% English
75% Reading	70% Consumer Education
73% Child Psychology	67% History
73% Ethnic Awareness	63% Hobby & Recreation Subjects
72% Spanish	62% Adolescent Psychology
72% Health	59% Philosophy

Expansion of On-Campus program:
A strong need was expressed in order of preference for:
Para-professional training
medical - 83%, legal - 79%, bilingual-bicultural 78%, educational - 74%

Lectures and classes conducted in Spanish
Mexican history - 77%, Mexican literature - 75%, Health - 75%, Child development - 73%, adolescent psychology 70%

Personal Opinions
Respondents indicated a strong need for strengthening of the relationship between College and community in all of the functions specified. However, when asked for their opinion regarding Harbor College's efforts to meet community needs, 33% replied affirmatively and 35% negatively. 136 respondents indicated a willingness to participate in planning for better programs.

DESCRIPTION OF PERSONAL CHARACTERISTICS BY GROUP MEMBERSHIP

	Program						Control	
	Fall '76		Spring		Total			
	N = 88		N = 81		N = 169		N = 147	
	#	%	#	%	#	%	#	%
NATURAL LANGUAGE								
Asian	32	36.4	17	21.0	49	29.0	26	17.6
Pilipino	7	8.0	23	28.4	30	17.8	28	18.9
Samoan	9	10.2	12	14.8	21	12.4	19	12.8
Spanish	40	45.5	28	34.6	68	40.2	73	49.3
SEX								
Male	43	48.9	40	49.4	83	49.1	82	55.4
Female	45	51.1	41	50.6	85	50.3	65	43.9
AGE Mean	29.20		25.38		27.37		24.93	
18 -20	27	30.7	29	35.8	56	33.1	46	31.1
21 - 25	20	22.7	20	24.7	40	23.7	39	26.4
26 - 30	10	11.4	9	11.1	19	11.2	21	14.2
31 - 35	5	5.7	5	6.2	10	5.9	13	8.8
36 - 40	13	14.8	8	9.9	21	12.4	6	4.1
41 - 51	12	13.6	7	8.6	19	11.2	15	10.1
EDUCATIONAL BACKGROUND (Yrs of Hi sch + Coll) Mean	4.471		4.712		4.631		4.186	
1							1	0.7
2	7	8.0	3	3.7	10	6.0	1	0.7
3	20	22.7	7	8.6	27	16.0	21	14.2
4	26	29.5	30	37.0	56	33.1	88	59.5
5	9	10.2	22	27.2	31	18.3	20	13.5
6	10	11.4	11	13.6	21	12.4	10	6.8
7	7	8.0	2	2.5	9	5.3	3	2.0
8	6	6.8	5	6.2	11	6.5	1	0.7
NATURAL LANGUAGE ABILITY Mean	5.586		4.605		5.118			
1 (Excellent)	18	20.7	42	51.9	60	35.5		
2 (Very Good)	63	72.3	29	35.8	93	55.0		
3 (Good)	4	4.5	9	11.1	13	7.8		
4 (Fair)	2	2.3	1	1.2	3	1.8		
5 (Poor)								
ENGLISH ABILITY Mean	8.966		6.877		7.988			
1			4	4.9	4	2.4		
2	11	12.6	35	43.1	46	27.3		
3	56	64.3	41	50.5	97	57.5		
4	11	12.6			11	6.6		
5	9	10.3	1	1.2	11	6.5		

DESCRIPTION OF
LOS ANGELES HARBOR COLLEGE PREVIOUS EXPERIENCE
BY GROUP MEMBERSHIP

	Program						Control	
	Fall '76		Spring		Total			
	N = 88		N = 81		N = 169		N = 147	
	#	%	#	%	#	%	#	%
PREVIOUS SEMESTERS—Mean	.875		.963		.905		3.81	
1	8	9.1	17	21.0	25	38	30	20.3
2	13	14.8	5	6.2	18	26	11	7.4
3	3	3.4	7	8.6	10	15	17	11.5
4	6	6.8	1	1.2	7	11	19	12.8
5	2	2.3	4	4.9	6	9	19	12.8
6			1	1.2	1	2	8	5.4
7							10	6.8
8							8	5.4
9 - 13							12	8.1
PREVIOUS UNITS: Mean	7.047		12.694		9.344		17.016	
0	47	57	25	25	76	45	21	17
1 - 10	9	9	12	15	21	13	28	23
11 - 20	14	16	16	20	30	18	31	25
21 - 30	9	10	10	13	19	11	21	16
31 - 40	3	3	6	8	9	5	16	13
41 - 50			2	2	2	1.2	7	6
PREVIOUS WITHDRAWALS Mean	4.046		3.272		3.667		13.322	
0	55	63.2	55	67.9	110	65.1	39	26.5
1 - 9	19	21.6	15	18.5	34	20.1	28	19.0
10 - 19	9	10.2	6	7.3	15	8.9	22	15.0
20 - 29	3	3.3	3	3.6	6	3.6	0	0.0
30 - 39	0	0.0	2	2.-	2	1.2	8	5.4
40 - 50	1	1.1			1	0.6	11	7.5
EMPLOYMENT: HOURS/WEEK Mean	24.563		27.508		25.977			
0	23	26.4	18	22.2	41	24.4		
1 - 10	11	12.5	3	3.7	14	8.3	no	
11 - 20	26	29.8	26	32.0	53	31.0	information	
21 - 30	5	5.6	6	7.4	11	6.5		
31 - 40	21	24.1	28	34.5	49	29.0		
Over 40	1	1.1			1	0.6		
MAJOR:								
Prevocational	20	22.7	6	7.4	26	15.4	13	8.8
Vocational	51	58.0	60	74.1	111	65.7	94	63.5
Academic	17	19.3	15	18.5	32	18.9	28	18.9

		Program						Control	
		Fall '76		Spring		Total			
		N = 88		N = 81		N = 169		N = 147	
		#	%	#	%	#	%	#	%
COMMUNICATION DEVELOPMENT	Mean	6.278		5.603		5.962		.497	
0 - 1		19	21.6	30	37.0	49	29.1	130	88.4
2 - 4		18	20.7	23	28.4	41	24.4	15	10.2
5 - 7		24	27.6	12	14.7	36	21.4	1	0.7
8 - 10		15	17.2	9	11.1	24	14.7	0	0
11 - 13		11	12.6	7	8.6	18	11.1	1	0.7
BILINGUAL VOCATIONAL HOURS	Mean	4.477		4.318		4.461		0.924	
0		43	49.4	37	45.7	80	47.3	115	77.7
1 - 3		25	28.6	20	24.8	45	26.6	34	9.5
4 - 6		11	12.6	18	22.2	29	17.1	9	6.1
7 - 9		6	6.8	6	7.5	12	7.2	5	3.5
10 - 12		2	2.3			3	1.8	1	0.7
UNITS ATTEMPTED	Mean	11.471		11.337		11.345		10.514	
1 - 5		10	11.4	9	11	20	12	19	14
6 - 10		22	25.2	34	30	46	27	40	27
11 - 15		36	41.2	28	35	64	38	75	50
16 - 20		19	21.8	19	24	38	33	13	9
UNITS COMPLETED	Mean	9.437		8.691		9.083		6.291	
0		2	2	3	4	5	3	35	23.6
1 - 5		18	21	17	21	35	21	35	23.6
6 - 10		30	34	34	42	65	38	35	23.6
11 - 15		26	30	18	23	44	26	36	24.3
16 - 20		11	9	9	11	10	12	5	3.4
COMMUNICATION GRADE	Mean	265.283		261.763		264.687		114.86	
W/F = 0		27	31.0	43	53.1	70	41.4	139	93.9
D = 1 - 149		1	1.1	1	1.2	2	1.2	3	2.0
C = 150 - 249		28	32.1	15	18.5	43	25.5	5	3.4
B = 250 - 349		21	24.0	18	22.1	40	23.7		
A = 350 - 400		10	11.4	4	4.9	14	8.3	1	0.7
BILINGUAL VOCATIONAL GRADE	Mean	273.718		252.579		263.286		228.372	
D = 50 - 149		1	1.1	3	3.7	4	15.4	3	2.1
C = 150 - 249		17	19.4	15	18.4	32	18.9	24	16.3
B = 250 - 349		13	14.7	14	17.2	27	16.0	10	7.9
A = 350 - 400		8	9.2	6	7.4	14	8.3	6	4.1

		Program						Control	
		Fall '76		Spring		Total			
		N = 88		N = 81		N = 169		N = 147	
		#	%	#	%	#	%	#	%
GPA	Mean	272.9		259.3		267.0		182.635	
D = 50 - 149		1	1.1	4	4.9	5	3.0	8	5.4
C = 150 - 249		36	40.9	27	33.3	63	37.5	51	34.5
B = 250 - 349		33	37.5	36	44.4	69	41.1	46	31.1
A = 350 - 400		15	17.0	11	13.6	26	15.5	7	4.7
COMPLETION RATE	Mean	8.588		8.397		8.500		5.696	
0 - 4		2	2.3	8	9.9	10	6.2	38	25.7
5 - 24		2	2.3	2	2.5	4	2.5	6	4.1
25 - 44		5	5.7	5	6.1	10	6.2	15	10.1
45 - 64		10	11.5	9	11.1	19	11.6	11	7.4
65 - 84		10	11.5	9	11.1	19	11.6	23	15.6
85 - 100		58	66.7	48	59.3	106	62.8	55	37.2

COMPLETION RATE

	1 - 3				4 - 6				7 - 9				10			
	PROGRAM		CONTROL		PROGRAM		CONTROL		PROGRAM		CONTROL		PROGRAM		CONTROL	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
NATURAL LANGUAGE:																
Asian	1	2	3	14	5	11	3	14	8	18	5	24	30	68	10	48
Pilipino	3	10	2	9	5	17	4	18	1	3	3	14	20	69	13	59
Samoan	0	0	3	23	4	19	2	15	7	33	3	23	10	48	5	22
Spanish	3	5	9	17	11	17	6	11	9	14	17	32	40	63	21	40
	eta = .17901 (Program)								eta = .23865 (Control)							
SEX:																
Male	4	5	13	23	12	16	7	11	9	12	12	19	52	68	30	48
Female	4	5	4	8	13	16	8	17	16	20	16	33	53	59	20	42
	eta = .04540 (Program)								eta = .04672 (Control)							
AGE:																
18 - 20	3	6	6	20	8	15	5	17	13	25	7	23	29	55	12	40
21 - 25	2	6	6	20	5	14	4	13	5	14	10	33	23	66	10	33
26 - 30	0	0	4	22	5	28	2	11	2	11	5	23	11	61	7	39
31 - 35	0	0	0	0	1	11	1	10	0	0	1	10	8	89	8	80
36 - 40	2	10	0	0	4	19	0	0	0	0	0	0	15	71	3	100
41 - 51	1	5	1	8	1	5	2	17	4	21	2	17	13	68	7	58
	eta = .12980 (Program)								eta = .28936 (Control)							
EDUCATIONAL BACKGROUND:																
1 - 2	1	11	0	0	1	11	0	0	4	44	2	200	3	33	0	0
3 - 4	5	12	13	35	13	32	13	30	13	30	23	65	52	127	33	70
5 - 6	0	0	4	27	9	43	1	7	6	28	3	20	30	130	13	147
7 - 8	2	23	0	0	2	20	1	33	2	25	0	0	12	133	3	167
	eta = .13500 (Program)								eta = .22648 (Control)							
ENGLISH ABILITY:																
High	0	0	n.a.		0	0	n.a.		2	50	n.a.		2	50	n.a.	
Very Good	0	0			6	14			7	17			28	67		
Good	0	0			13	14			14	1[illegible]			59	62		
Fair	0	0			3	27			1	[illegible]			6	55		
Poor	0	0			3	30			1	1[illegible]			5	50		
	eta = .13640 (Program)															
NATURAL LANGUAGE ABILITY:																
High	2	3	n.a.		8	14	n.a.		11	19	n.a.		36	61	n.a.	
Very Good	5	6			14	16			11	12			57	63		
Good	1	9			2	18			2	18			6	55		
Fair	0	0			1	33			1	33			1	33		
	eta = .05611 (Program)															
WORK WEEK (Hours):																
0	2	5	n.a.		8	20	n.a.		4	10	n.a.		26	63	n.a.	
1 - 10	0	0			1	7			3	21			10	71		
11 - 20	3	6			9	18			13	26			24	48		
21 - 30	0	0			0	0			2	20			7	70		
31 - 40	0	0			0	0			1	33			2	67		
40+	3	7			7	13			2	4			31	69		
	eta = .13410 (Program)															

COMPLETION RATE

	1 - 3				4 - 6				7 - 9				10			
	PROGRAM		CONTROL		PROGRAM		CONTROL		PROGRAM		CONTROL		PROGRAM		CONTROL	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
MAJOR:																
Prevocational	0	0	1	8	2	8	0	0	4	15	1	8	19	73	3	23
Vocational	7	7	8	9	18	17	14	15	14	13	20	21	66	61	33	35
Academic	1	4	7	25	5	17	1	4	7	24	6	21	15	52	7	25
	eta = .11023(Program)								eta = .23266(Control)							
PREVIOUS SEMESTERS:																
1 - 2	2	10	8	26	5	24	4	13	5	24	8	26	9	43	11	35
3 - 4	1	6	1	3	5	29	5	17	3	18	8	27	8	47	16	53
5 - 6	1	10	4	27	1	10	2	13	2	20	1	7	6	60	8	53
7 - 8	1	14	3	19	2	29	0	0	0	0	9	56	4	57	4	25
9 - 10	0	0	0	0	2	33	3	30	2	33	2	20	2	33	5	50
	eta = .15500(Program)								eta = .34180(Control)							
HARBOR COLLEGE UNITS:																
0	4	6	2	10	9	12	0	0	11	15	0	0	46	63	7	35
1 - 10	1	5	4	14	3	14	4	14	3	14	4	14	13	62	9	32
19 - 20	1	3	3	10	6	20	2	7	4	13	6	19	19	63	14	45
21 - 30	1	6	1	5	3	17	4	19	4	22	5	24	10	56	6	29
31 - 40	0	0	5	31	1	11	2	13	1	11	1	6	7	78	4	25
41 - 50	0	0	1	14	1	50	0	0	0	0	5	71	1	50	0	0
	eta = .09905(Program)								eta = .23430(Control)							
PREVIOUS WITHDRAWAL:																
0	5	5	3	9	12	11	2	6	14	13	5	15	73	68	16	47
1 - 9	2	6	5	13	7	22	4	10	6	19	8	21	17	53	14	36
10 - 19	1	7	3	11	2	14	3	11	4	29	7	25	6	43	7	25
20 - 29	0	0	1	5	1	17	2	9	1	17	3	14	4	67	10	46
30 - 39	0	0	1	13	2	100	2	25	0	0	2	25	0	0	1	13
40 - 50	0	0	2	18	1	100	0	0	0	0	2	18	0	0	2	18
	eta = .20389(Program)								eta = .18650(Control)							
COMMUNICATION DEVELOPMENT (Course Completed):																
0 - 1	1	14	1	14	3	43	3	43	2	29	2	29	1	14	1	14
2 - 4	0	0	1	8	12	32	1	8	5	14	7	58	20	54	3	25
5 - 7	0	0	0	0	3	9	0	0	7	20	0	0	25	71	1	100
8 - 10	2	8			0	0			6	25			16	67		
11 - 13	1	6	0	0	0	0	0	0	3	18	0	0	13	76	1	100
	eta = .40270(Program)								eta = .25338(Control)							
BILINGUAL VOCATIONAL EDUCATION HOUR:																
0	4	5	15	13	10	13	9	8	11	15	2	18	48	63	35	31
1 - 3	4	9	0	0	4	9	1	7	9	21	4	29	25	57	7	50
4 - 6	0	0	2	22	6	21	3	33	3	10	0	0	20	69	4	44
7 - 9	0	0	0	0	5	42	2	40	2	17	1	20	5	42	2	40
10 - 12	0	0	0	0	0	0	0	0	0	0	2	50	2	100	1	25
	eta = .14133(Program)								eta = .20610(Control)							
PEER COUNSELING HOURS:																
0	6	7	n.a.		12	14	n.a.		11	13	n.a.		54	63	n.a.	
1 - 10	2	4			10	21			6	13			30	63		
11 - 20	0	0			2	18			3	27			6	55		
21 - 30	0	0			0	0			1	17			4	67		
	eta = .05030(Program)															

	0				1 - 3				4 - 6				7 - 9				10			
	PROG		CONT		PROG		CONT		PROG		CONT		PROG		CONT		PROG		CONT	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
VOCATIONAL EDUCATION GRADE:																				
0	5	6	36	35	6	7	14	14	12	14	11	11	14	16	20	19	50	58	23	22
50 - 149	0	0	0	0	0	0	0	0	1	25	0	0	0	0	1	33	3	75	2	67
150 - 249	0	0	1	4	2	7	1	4	7	23	0	0	1	19	5	21	16	52	17	71
250 - 349	0	0	0	0	0	0	2	20	4	15	1	10	4	15	2	10	19	70	5	50
350 - 400	0	0	0	0	0	0	0	0	1	7	3	50	1	7	0	0	12	86	3	50
	eta = .20890(Program)												eta = .43580(Control)							
COMMUNICATION GRADE:																				
0	4	6	36	26	6	9	17	12	15	22	14	10	8	12	25	18	34	51	46	33
50 - 149	0	0	0	0	0	0	0	0	1	50	1	33	0	0	1	33	1	50	1	33
150 - 249	1	2	1	20	2	5	0	0	8	19	0	0	11	26	1	20	21	49	3	60
250 - 349	0	0			0	0			1	3			6	16			31	82		
350 - 400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	100	13	100	0	0
	eta = .36990(Program)												eta = .11830(Control)							

	G P A															
	D 50 - 149				C 150 - 249				B 250 - 349				A 350 - 400			
	PROGRAM		CONTROL		PROGRAM		CONTROL		PROGRAM		CONTROL		PROGRAM		CONTROL	
NATURAL LANGUAGE																
Asian	1	2	3	14	16	36	10	47	16	36	7	33	12	27	1	5
Pilipino	2	7	2	9	10	35	7	30	14	48	12	52	3	10	2	9
Samoan	1	5	2	14	14	67	6	43	4	19	5	36	2	10	1	7
Spanish	1	2	1	2	23	34	27	60	35	52	22	42	8	12	3	6
	eta=(Program).21650								eta=(Control).15674							
SEX:																
Male	1	1	7	11	34	43	28	49	29	36	25	40	16	20	3	5
Female	4	5	1	1	29	35	23	47	40	48	21	43	10	12	4	8
	eta=(Program).04920								eta=(Control).13140							
EDUCATIONAL BACKGROUND:																
1 - 2	0	0	0	0	6	67	1	50	2	22	1	50	1	11	0	0
3 - 4	4	5	6	7	33	37	36	44	35	42	37	45	12	14	2	3
5 - 6	1	2	2	10	18	37	11	53	24	49	6	30	6	12	2	10
7 - 8	0	0	0	0	6	33	2	50	6	33	2	50	6	33	0	0
	eta=(Program).18280								eta=(Control).14390							
ENGLISH ABILITY:																
High	0	0	n.a.		1	25	n.a.		0	0	n.a.		3	75	n.a.	
Very Good	1	3			2	5			16	40			21	53		
Good	2	3			2	3			38	47			39	48		
Fair	1	11			0	0			5	56			3	33		
Poor	2	22			0	0			4	44			3	33		
	eta=.19420															
NATURAL LANGUAGE ABILITY:																
High	1	2	n.a.		1	2	n.a.		18	35	n.a.		31	61	n.a.	
Very Good	4	5			3	4			38	50			31	41		
Good	1	8			1	8			4	31			7	54		
Fair	0	0			0	0			3	100			0	0		
Poor																
	eta=.19340															
WORK WEEK (Hours):																
0	1	3	n.a.		1	3	n.a.		16	44	n.a.		18	50	n.a.	
1 - 10	0	0			0	0			6	55			5	46		
11 - 20	1	2			3	7			20	44			21	47		
21 - 30	2	20			0	0			4	40			4	40		
31 - 40	0	0			0	0			2	50			2	50		
40+	2	5			1	3			15	41			19	51		
	eta=.14220															

*eta calculated for GPA dependent

GPA

	D 50 - 149 PROGRAM #	D 50 - 149 PROGRAM %	D 50 - 149 CONTROL #	D 50 - 149 CONTROL %	C 150 - 249 PROGRAM #	C 150 - 249 PROGRAM %	C 150 - 249 CONTROL #	C 150 - 249 CONTROL %	B 250 - 349 PROGRAM #	B 250 - 349 PROGRAM %	B 250 - 349 CONTROL #	B 250 - 349 CONTROL %	A 350 - 400 PROGRAM #	A 350 - 400 PROGRAM %	A 350 - 400 CONTROL #	A 350 - 400 CONTROL %
MAJOR:																
Prevocational	0	0	0	0	11	44	3	50	10	40	2	34	4	16	1	17
Vocational	4	4	5	7	38	36	35	46	49	46	31	40	15	14	6	8
Academic	1	3	3	14	14	48	10	48	10	35	8	38	7	24	0	0
	eta=(Program).04826								eta=(Control).20572							
PREVIOUS SEMESTERS:																
1 - 2	0	0	2	7	21	50	13	43	16	38	13	43	5	12	2	7
3 - 4	2	12	0	0	8	47	11	37	4	24	16	53	3	18	3	10
5 - 6	0	0	2	12	4	57	9	53	3	43	5	30	0	0	1	6
7 - 8	0	0	1	6	0	0	9	53	0	0	7	41	0	0	0	0
9 - 10	0	0	1	10	0	0	5	50	0	0	3	30	0	0	1	10
	eta=(Program).24600								eta=(Control).34300							
HARBOR COLLEGE UNITS:																
0	2	3	0	0	28	37	4	20	27	36	4	20	14	19	0	0
1 - 10	1	5	3	11	10	48	10	36	8	38	6	21	2	10	2	7
19 - 20	1	3	1	3	8	27	10	39	15	50	11	36	6	20	4	15
21 - 30	0	0	1	5	6	32	8	50	10	53	7	49	3	16	0	0
31 - 40	0	0	1	6	6	67	6	46	2	22	6	38	1	11	0	0
41 - 50	1	50	0	0	1	50	3	50	0	0	3	50	0	0	0	0
	eta=(Program).21565								eta=(Control).32433							
PREVIOUS WITHDRAWAL:																
0	2	2	2	8	35	33	9	35	48	46	13	50	20	19	2	8
1 - 9	2	6	2	7	13	38	14	45	14	41	13	42	5	15	2	7
10 - 19	0	0	0	0	9	60	10	50	5	33	9	45	1	7	1	5
20 - 29	1	17	1	4	3	50	11	41	2	33	5	19	0	0	0	0
30 - 39	0	0	0	0	2	100	2	33	0	0	3	50	0	0	1	17
40 - 50	0	0	1	14	1	100	5	71	0	0	0	0	0	0	1	14
	eta=(Program).15856								eta=(Control).14680							
COMMUNICATION DEVELOPMENT (Course Completed):																
0 - 1	3	6	8	16	15	31	42	32	21	43	39	30	7	14	7	5
2 - 4	2	5	0	0	17	42	7	47	15	37	7	47	5	12	0	0
5 - 7	0	0	0	0	15	42	1	100	13	36	0	0	8	22	0	0
8 - 10	0	0	0	0	9	38	0	0	12	50	0	0	3	13	0	0
11 - 13	0	0	0	0	7	39	1	100	8	44	0	0	3	17	0	0
	eta=(Program).21683								eta=(Control).18472							
BILINGUAL VOCATIONAL EDUCATION HOUR:																
0	4	5	8	10	29	38	43	53	28	36	27	33	16	21	3	4
1 - 3	1	2	0	0	14	33	5	39	23	54	7	54	5	12	1	8
4 - 6	0	0	0	0	14	48	1	11	13	45	5	56	2	7	3	33
7 - 9	0	0	0	0	6	50	2	40	4	33	3	60	2	17	0	0
10 - 12	0	0	0	0	0	0	0	0	1	50	3	100	1	50	0	0
	eta=(Program).11012								eta=(Control).37826							
PEER COUNSELING HOURS:																
0	5	7	n.a.		3	4	n.a.		30	41	n.a.		36	49	n.a.	
1 - 10	0	0	n.a.		2	5	n.a.		22	54	n.a.		17	42	n.a.	
11 - 20	0	0	n.a.		0	0	n.a.		4	36	n.a.		7	64	n.a.	
21 - 30	0	0	n.a.		0	0	n.a.		3	60	n.a.		2	40	n.a.	
	eta=(Program).12110															

*eta calculated for GPA dependent

	W 0				D 50-149				C 150-249				B 250-349				A 350-400			
	PROG		CONT		PROG		CONT		PROG		CONT		PROG		CONT		PROG		CONT	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
VOCATIONAL EDUCATION GRADE:																				
0	5	6	35	34	3	3	8	8	36	40	31	30	29	32	26	25	18	20	4	4
50 - 149	0	0	0	0	1	25	0	0	3	75	3	100	0	0	0	0	0	0	0	0
150 - 249	0	0	0	0	1	3	0	0	21	66	17	71	10	31	7	29	0	0	0	0
250 - 349	0	0	0	0	0	0	0	0	3	11	0	0	23	85	10	100	1	4	0	0
350 - 400	0	0	0	0	0	0	0	0	0	0	0	0	7	50	3	50	7	50	3	50
	eta=(Program).39311												eta=(Control).43689							
COMMUNICATION GRADE:																				
0	5	7	35	25	4	6	8	6	23	35	45	33	30	43	43	31	8	11	7	5
50 - 149	0	0	0	0	1	50	0	0	1	50	3	100	0	0	0	0	0	0	0	0
150 - 249	0	0	0	0	0	0	0	0	36	84	3	60	6	14	2	40	1	2	0	0
250 - 349	0	0	0	0	0	0	0	0	3	8	0	0	30	77	0	0	6	15	0	0
350 - 400	0	0	0	0	0	0	0	0	0	0	0	0	3	21	1	100	11	79	0	0
	eta=(Program).54962												eta=(Control).11270							
COMPLETION RATE:																				
0	4	80	34	92	0	0	0	0	0	0	1	3	1	20	1	3	0	0	1	3
1 - 3	0	0	0	0	1	13	5	29	3	38	6	35	2	25	6	35	2	25	0	0
4 - 6	0	0	0	0	1	4	2	13	14	56	4	27	9	36	5	33	1	4	4	27
7 - 9	0	0	0	0	0	0	1	4	15	60	16	37	9	36	11	39	1	4	0	0
10	1	1	1	2	3	3	0	0	30	30	24	48	44	44	23	46	22	22	2	4
	eta=(Program).45397												eta=(Control).78714							

*eta calculated for GPA dependent

SEX

	PROGRAM M	PROGRAM F	CONTROL M	CONTROL F
ASIAN	57	43	50	50
PILIPINO	47	53	50	50
SAMOAN	33	67	53	47
SPANISH	50	50	62	38

AGE

	PROG 18 - 20	CONT 18 - 20	PROG 21 - 25	CONT 21 - 25	PROG 26 - 30	CONT 26 - 30	PROG 31 - 35	CONT 31 - 35	PROG 36 - 40	CONT 36 - 40	PROG 41 - 51	CONT 41 - 51
ASIAN	29	42	38	27	21	12	2	4	4	4	6	12
PILIPINO	28	39	10	19	7	12	10	12	24	4	21	15
SAMOAN	48	26	38	32	10	16	0	5	0	11	5	11
SPANISH	34	28	16	31	9	18	9	12	18	3	13	9

EDUCATIONAL BACKGROUND

	PROG 1	CONT 1	PROG 2	CONT 2	PROG 3	CONT 3	PROG 4	CONT 4	PROG 5	CONT 5	PROG 6	CONT 6	PROG 7	CONT 7	PROG 8	CONT 8
ASIAN	0	0	6	0	15	31	32	42	17	19	19	8	9	0	2	0
PILIPINO	0	0	0	0	17	7	24	64	14	14	17	7	3	7	24	0
SAMOAN	0	0	0	0	0	11	43	58	38	21	14	11	5	0	0	0
SPANISH	0	1	9	1	33	13	30	66	13	10	8	6	3	1	5	1

PREVIOUS SEMESTERS

	PROG 1	CONT 1	PROG 2	CONT 2	PROG 3	CONT 3	PROG 4	CONT 4	PROG 5	CONT 5	PROG 6	CONT 6	PROG 7	CONT 7	PROG 8	CONT 8	PROG 9	CONT 9
ASIAN	55	19	36	12	0	15	9	12	0	15	0	0	0	12	0	4	0	12
PILIPINO	40	17	27	0	13	17	13	17	7	17	0	13	0	8	0	4	0	8
SAMOAN	31	12	7	18	31	6	15	12	15	12	0	6	0	6	0	18	0	12
SPANISH	33	28	30	8	15	12	7	15	11	13	4	6	0	6	0	5	0	8

PREVIOUS WITHDRAWAL

	PROGRAM 1	CONTROL 1	PROGRAM 2	CONTROL 2	PROGRAM 3	CONTROL 3	PROGRAM 4	CONTROL 4	PROGRAM 5	CONTROL 5
ASIAN	70	30	30	20	0	15	0	15	0	20
PILIPINO	50	47	40	32	10	11	0	5	0	5
SAMOAN	54	29	23	21	8	36	8	7	8	7
SPANISH	62	36	20	27	15	22	4	6	0	9

GPA

	PROGRAM 50	CONTROL 149	PROGRAM 150	CONTROL 249	PROGRAM 250	CONTROL 349	PROGRAM 350	CONTROL 400
ASIAN	2	14	36	48	36	33	27	5
PILIPINO	7	9	35	30	48	52	10	9
SAMOAN	5	14	67	43	19	36	10	7
SPANISH	2	2	34	51	52	42	12	6

COMPLETION RATE

	PROG 1	CONT 1	PROG 2	CONT 2	PROG 3	CONT 3	PROG 4	CONT 4	PROG 5	CONT 5	PROG 6	CONT 6	PROG 7	CONT 7	PROG 8	CONT 8	PROG 9	CONT 9	PROG 10	CONT 10
ASIAN	0	0	0	0	2	14	2	5	7	5	2	5	9	5	5	19	5	0	68	48
PILIPINO	3	0	0	5	7	5	3	9	3	0	10	9	3	5	0	5	0	5	69	59
SAMOAN	0	8	0	0	0	15	5	0	5	8	10	8	5	0	19	23	10	0	48	39
SPANISH	3	6	0	2	2	9	5	2	6	2	6	8	3	8	8	17	3	8	64	40

Hypothesis 1

Learning gained from participation in the program will be evidenced by a distinct improvement in the completion rates (CR) for NLOE students.

Operational hypothesis:
Completion rates for NLOE students in the program will be consistently higher than those of a comparable randomly selected control group at a measure beyond the .01 significance level.

H_{CR}: $\mu p > \mu c$ $\quad p$ = program $\quad c$ = control

Null Hypothesis
H_o: $\mu p \leq \mu c$

Multiple R	0.33402	Analysis of Variance	DF	Sum of Sq.	Mean of Sq.	F
R_2	0.11157	Regression	1	50682.228	50682.2	39.4317
Std. error	35.8513	Residual	314	403589.607	428.5317	

Significant beyond .001

Variable	B	B	Std. Error	F
Program	25.3797	0.33402	4.0417	39.432
Control	58.3108			

Rejection of the null hypothesis in favor of the set of alternatives H_1: $\mu p > \mu c$ is warranted.

The F = 39.432 is significant beyond the .001 level indicating that program participation is associated with improved completion rate. The mean completion rate which may be expected for non-participant NLOE students is 58.3% as indicated by the Control B (Y intercept). Addition of the Program B yields an expected completion rate for program participants of 83.7%. This improvement represents a 25% improvement in terms of the overall possible completion rate at 0 to 100, and a 44% increase in the expected completion rate for non-program NLOE students.

SUMMARY TABLE

Variable	Multiple R	R Square	RSQ Change	Simple R	B	F
DI	.334	.112	.112	.334	1.292	39.432
CMNDVMNT	.370	.137	.026	.321	0.225	24.879
BIVOEDHR	.393	.155	.018	.177	0.168	19.029
EDBKG	.405	.164	.009	.138	0.240	15.226
HCUN	.405	.164	.001	-.034	0.008	12.190
PRESEMS	.406	.165	.001	-.186	0.053	10.163

The summary table generated by stepwise regression indicates the order of variable inclusion according to greatest increment in RSQ. Even though F's may be significant the increments are too small to be meaningful. Therefore, "Program Participation" is indicated to be the major contributor to improved completion rates according to the data collected.

Hypothesis II

Learning gained from participation in the program will be evidenced by a distinct improvement in the grade point average of NLOE students.

Operational Hypothesis:
Grade point averages for NLOE students in the program will be consistently higher than those of a comparable randomly selected control group at a measure beyond the .001 significance level.

GPA range 0 to 400
H_{GPA}: $\mu p > \mu c$

Null Hypothesis
H_o: $\mu p \leq \mu c$

Multiple R	0.34870	Analysis of Variance	DF	Sum of Sq.	Mean of Sq.	F
R_2	0.12159	Regression	1	453401.2439	453401.2439	43.46546
Std. error	102.13375	Residual	314	3475427.95544	10431.29922	

Significant beyond .001

Variable	B	B	Std. error	F
Program	75.91007	0.34870	11.51403	43.465
Control	182.90541			

Rejection of the null hypothesis in favor of the set of alternatives H_{II}: $\mu p > \mu c$ is warranted.

The F = 43. is significant beyond the .001 level indicating that program participation is associated with improved grade point average. The mean G.P.A. which may be expected for non-participant NLOE students is 182.9 as indicated by the control B (Y intercept). Addition of the Program B yields an expected mean GPA for program participants of 258.8. The difference in means in GPA's represents a 19% improvement in terms of the overall possible range of 0 to 400; and a 42% increase in the expected GPA for non-program NLOE students.

SUMMARY TABLE

Variable	Multiple R	R Square	RSQ Change	Simple R	B	F
DI	.349	.122	.122	.349	69.339	43.465
BIVOEDHR	.378	.143	.021	.204	5.399	26.020
CHNDVMNT	.385	.148	.006	.251	2.984	18.103
EDBKG	.392	.154	.006	.127	4.745	14.127
HCUN	.396	.156	.003	-.015	0.216	11.496
PRESEMS	.396	.157	.000	-.154	145.214	9.565

The summary table generated by stepwise regression indicates the order of variable inclusion according to greatest increment in RSQ. Even though F's may be significant the increments are too small to be meaningful. Therefore, "Program Participation" is indicated to be the major contributor to improved grade point averages according to the data collected.

Hypothesis III

Improved achievement for NLOE students is a function of the joint Student ⇄ Institution, progress through the learning cycle, Information → understanding → Appropriate Action, to make effective use of their collective resources.

Operational Hypothesis:

H3: Diagnostic assessment and prescriptive assignment to educational services appropriate to individual student attributes and interests causes reduction in time loss and diminished achievement for NLOE students and higher retention rate for the college.

H3a. College Development will demonstrated to be the major component contributing to successful achievement and retention for NLOE students if they are appropriately enrolled following diagnostic and prescriptive counseling.

H3a: $GPA_p > GPA_c$ sig. $< .001$ $CR_p > CR_c$ sig. $< .001$

CD: $U_p > U_c$ CD: CR $eta_p > eta_c$ CD: GPA $eta_p > eta_c$

U_p=6 U_c=.5 eta_p=.428 eta_c=.253 eta_p=.314 eta_c=.180

H3b: Participation in courses adapted to accommodate learning needs of NLOE students will be demonstrated to improve their performance and college retention.

H3b: $GPA_p > GPA_c$ sig. $< .001$ $CR_p > CR_c$ sig. $< .001$

BVE: $U_p > U_c$ BVE: CR $eta_p > eta_c$ BVE: GPA $eta_p > eta_c$

U_p=4.5 U_c=0.9 eta_p=.110 eta_c=.378 eta_p=.141 eta_c=.206

H3c: Los Angeles Harbor College Previous Experience will have a lesser relationship to achievement measures for the program group than for the control group.

Previous Semesters: $U_p < U_c$;	GPA: $eta_p < eta_c$;	CR: $eta_p < eta_c$	
	$Mean_p$ = .905	$Mean_c$ = 3.81	
GPA:	eta_p = .246	eta_c = .343	diff. = .097
CR:	eta_p = .155	eta_c = .342	diff. = .155
Previous LAHC Units: $U_p < U_c$;	GPA: $eta_p < eta_c$;	CR: $eta_p < eta_c$	
	$Mean_p$ = 9.34	$Mean_c$ = 17.02	
GPA:	eta_p = .216	eta_c = .324	diff. = .108
CR:	eta_p = .099	eta_c = .234	diff. = .333
Previous Withdrawals: $U_p < U_c$;	$r^2_p < r^2_c$		
	$Mean_p$ = 3.67	$Mean_c$ = 13.32	
GPA:	eta_p = .159	eta_c = .147	diff. = .306
CR:	eta_p = .204	eta_c = .187	diff. = .391

Comparisons among measures support the hypothesized relationships. Differences between etas for program and control groups on individual measures of association indicate that communication development (CD) and previous college experience (semesters, units, withdrawals) have a much stronger relationship to positive achievement for the control group than for the program group. Adapted vocational instruction (BVE) has a stronger relation to success factors for control than for program participants; however, it was the one program component in which students were engaged.

Listed below are several statements of reasons for attending Harbor College.
Please give us your personal opinion regarding:
*1 - the importance of each reason in leading to your enrollment(left column).
**2 - the amount of progress you have made through your attendance in relation to each statement(right column).
Circle the number on each side which best represents your opinion.

REASONS FOR ENROLLMENT

* Importance				** Progress		
High	Medium	None		Much	Little	None
A	B	C	(1) To appreciate and respect other peoples' values.	A	B	C
A	B	C	(2) To improve my self-confidence.	A	B	C
A	B	C	(3) To improve my natural language.	A	B	C
A	B	C	(4) To cope effectively with life situations.	A	B	C
A	B	C	(5) To take academic courses for advancement.	A	B	C
A	B	C	(6) To take vocational courses for employment.	A	B	C
A	B	C	(7) To improve my ability in English: (7) Reading	A	B	C
A	B	C	(8) Speaking	A	B	C
A	B	C	(9) Writing	A	B	C
A	B	C	(10) To improve my ability in math.	A	B	C
A	B	C	(11) To increase effectiveness in accomplishing my goals.	A	B	C
A	B	C	(12) To find out how to get a job.	A	B	C
A	B	C	(13) To please my parents.	A	B	C
A	B	C	(14) To develop analytical thinking.	A	B	C
A	B	C	(15) To gain recognition in my community.	A	B	C
A	B	C	(16) To develop self-discipline and effective time management.	A	B	C
A	B	C	(17) To understand this country's system and values.	A	B	C
A	B	C	(18) To gain recognition as an expert in my field.	A	B	C
A	B	C	(19) To have fun in a variety of courses.	A	B	C

(19) Other reasons for attendance: _____

_____

_____

_____

(20) Other personal gain from attendance: _____

_____

_____

_____

_____

Sex _____ S.S. #_____

NAME_____ AGE_____ MOTHER TONGUE_____

ADDRESS_____ Telephone No. _____

Date of birth_____ No. of years of formal schooling _____ Highschool _____ Other

Major (If known or declared) _____

Have you ever been in college? _____ Yes _____ No

If yes, what courses did you take?

_____ _____

_____ _____

_____ _____

No. of semesters at Harbor _____ No. of units completed _____

What courses are you taking now? (_____ Semester, 19____)

_____ _____

_____ _____

_____ _____

Have you ever taken an interest / aptitude / verbal test? _____ Yes _____ No

If yes, when? _____

Academic backgrounds:

_____ Highschool Did you graduate? _____ Yes ____ No

_____ College or " " " _____ Yes ____ No

university " " " _____ Yes ____ No

_____ and major

_____ Other " " " _____ Yes ____ No

What skills do you have?

_____ _____

_____ _____

ASPIRATION _____

(What would you like to be?) _____

_____

Who is supporting you? _____ self _____ (parents) _____ scholarship) _____ (other)

How do you get to school? _____ (own car) _____ (car pool) _____ school bus ____(other)

How many miles do you live from school? _____ (1 - 5 miles)

_____ (5 - 10 ")

_____ (10 - 15 ")

_____ (more than 15 miles)

How do you rate your _____?: Reading _____; Writing _____; Speaking _____

How do you rate your English? Reading ____ Excellent _____ Good ____ Fair _____ Poor

Writing ____ Excellent _____ Good ____ Fair _____ Poor

Speaking ___ Excellent _____ Good ____ Fair _____ Poor

How much time do you devote to learning English? _____ (No. of hours per week)

Do you feel personal counseling and orientation can help you? _____ Yes _____ No

Do you feel you can use peer assistance? _____ Yes _____ No

Do you have any handicaps? _____ Yes _____ No

What kind of work have you done?

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

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